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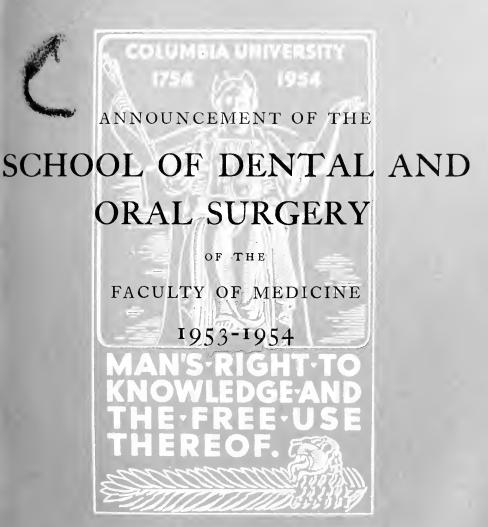
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BULLETIN OF INFORMATION

Fifty third Series, No. 23

June 20, 1953



1754 — THE BICENTENNIAL YEAR — 1954

COLUMBIA-PRESBYTERIAN MEDICAL CENTER
630 WEST 168TH STREET · NEW YORK 32, N.Y.

Columbia University Bulletin of Information

Fifty-third Series, No. 23

June 20, 1953

Issued at Columbia University, Morningside Heights, New York 27, N.Y. weekly from January for forty-six consecutive issues. Reentered as second-class matter August 15, 1952, at the Post Office at New York, N.Y., under the Act of August 24, 1912. Acceptance for mailing at a special rate of postage provided for in Section 1103, Act of October 3, 1917, authorized.

The series includes the Report of the President to the Trustees and the Announcements of the several Colleges and Schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these Announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 6,000—1953

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: Wadsworth 3–2500.

Announcements

The Announcements of each College or School and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this Announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

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CONDENSED ACADEMIC CALENDAR

1953

September	10	Thursday, through September 12, Saturday. Registration, including payment of fees.
September	14	Monday. Classes begin.
November	3	Tuesday. Election Day. Holiday.
November	26	Thursday. Thanksgiving Day. Holiday.
November	28	Saturday. End of first trimester.
November	30	Monday. Beginning of second trimester.
December 21 Monday, through		Monday, through
1954		
January	3	Sunday. Christmas Holidays.
February	12	Friday. Lincoln's Birthday. Not a University Holiday.
February	22	Monday. Washington's Birthday. Holiday.
February	27	Saturday. End of second trimester.
March	1	Monday. Beginning of third trimester. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
April	11	Sunday, through April 18, Sunday. Easter Holidays.
May	22	Saturday. Last day of classes.
May	24	Monday, through May 28, Friday. Final examinations.
May	31	Monday. Memorial Day. Holiday.
June	1	Tuesday. Conferring of degrees.

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FACULTY OF MEDICINE

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AT SCHOOL OF DENTAL AND ORAL SURGERY

THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

From its inception, the program of dental education at Columbia University has been fostered by and associated with the University's School of Medicine. The Faculty of Medicine at its stated meetings of November and December, 1915, recommended to the Trustees that a dental school be established in the University on "University Lines."

The President of the University in his annual report of 1916 informed the Trustees that "during the year a group of men have come forward with a well-supported proposal that there be established in connection with the Medical School, a school for the training of dental surgeons." The President also reported that "the project was carefully formulated and presented to the Medical Faculty and received the formal approval of that Faculty and later of the Trustees."

In May, 1916, the University issued a pamphlet entitled A Dental School on University Lines. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed:

"Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In the fall of 1917 James N. Jarvie gave a substantial sum to a fund "to found and maintain the proposed dental school of the University, described in the pamphlet entitled A Dental School on University Lines issued by Columbia University, May 1916."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and from that date the School became an integral part of the University. On March 1, 1920, the dental building adjacent to the School of Medicine and Vanderbilt Clinic was finished and assigned to the use of this School.

On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University. By this merger Columbia acquired two large buildings, at 302–306 East 35th Street and 309–315 East 34th Street, in which the School was housed up to the time of moving into the Medical Center.

The merging of the schools did not alter the University's policy for dental education. In the 1923–1924 Announcement of the School of Dental and Oral Surgery this policy was reaffirmed by the statement, "It is the purpose of the School of Dental and Oral Surgery to combine in the highest degree practicable a sound knowledge of the fundamentals of medicine with adequate training in the technical procedures of dental science and arts."

In September, 1928, the School was moved to the Columbia University-Presbyterian

Hospital Medical Center. The dental department of the School occupies three floors, a net area of forty thousand square feet. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the School, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the Faculties of the two schools were merged July 1, 1945. This Faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the Faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School of Dental and Oral

Surgery.

REQUIREMENTS FOR ADMISSION, PROMOTION AND GRADUATION

ADMISSION TO FIRST YEAR OF THE SCHOOL OF DENTAL AND ORAL SURGERY

Application.—It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for five dollars, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York

State Board of Regents:

	Semester Hours
English composition and literature	6
Physics	6
Biology	6
Chemistry (including an approved course in organic	
chemistry)	12

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within ten days after notification of acceptance

(see page 9).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined Courses with Columbia College.—Upon receiving ninety-four points credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above.

Combined Courses with Barnard College.—Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard College.

Combined Courses with the School of General Studies.—Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined Courses in Dentistry and Medicine.—It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one Summer Session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the office of the Registrar and file a registration blank giving such information as may be required. The periods set aside for registration in each session are stated in the Academic Calendar at the beginning of this Announcement. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University Statutes provide that tuition fees and the University fee are payable semiannually in advance. No reduction is made for late registration. Registration will not be complete until such fees are paid. Checks should be drawn to the order of Columbia University and presented in person or mailed to the office of the Bursar. Payment of fees after the last day of registration (see the Academic Calendar) imposes automatically the statutory charge of \$3.00 for the privilege. Under the regulations, the privileges of the University are not available to any student until he has completed his registration.

The fees to be paid by students are subject to change at any time at the discretion of

the Trustees.

The following annual fees are prescribed for dental students:

a) University Fee

 For each Winter or Spring Session or any part thereof, for students enrolled for:

One to four points, inclusive	\$	5.00
More than four points to nine points, inclusive	J	0.00
More than nine points	2	20.00
For each Summer Session or any part thereof		7.00
For registration as engaged in research only for any period not longer than		
a Winter or a Spring Session.	2	20.00

b) Tuition Fee

2.

For the course in dentistry for one academic year (or equivalent) in the case of a student enrolled for the full course, payable in two installments For students not enrolled for the full course, fees are to be assessed by the Registrar as provided by the University Statutes.

825.00

c) Fee for Application

For a degree 20.00

d) Privileges

 Late registration or late application for a degree or for deficiency or special examinations

examinations 3.00
2. Deficiency or special examinations 3.00
3. Renewal of application for any degree 1.00

e) Student Health Service Fee

This fee will be used to pay the annual premium of the Associated Flospital Service of New York for hospital insurance and to pay part of the cost of the student health service.

For all students, per academic year

\$25.00

f) Case Rental

For Sophomores, Juniors, and Seniors, rental for one instrument case, for one academic year, payable in two installments

5.00

g) Rebates

- The University fee and the fee for application for any degree shall not be subject to rebate.
- 2. No tuition fee shall be returned for any course which the student may for any reason discontinue. Exception to this rule may be made only in cases of total withdrawal from the University, when a partial return of fees may be authorized by the Registrar.

When a rebate is allowed for the discontinuance of courses or withdrawal from the University, such rebate will be reckoned from the day upon which the Registrar receives notice from the student.

h) Undue Breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance Fee.—Within ten days after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the School for the specific session, it will not be returned. If he registers at the School at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fee for Processing of Application.—A fee of \$5.00 is charged to every student who applies for admission to the School of Dental and Oral Surgery or the School of Medicine. This fee covers the cost of processing the application.

Fees for Repeated Courses.—Students obliged to repeat the work for any year are re-

quired to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and Supplies.—Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes.—All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers.—Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the School.

ESTIMATED EXPENSES

Following is an itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon the rates which prevailed during 1951–1952 and can be accepted as applicable in general for the year 1953–1954 unless national economic changes require their alteration.

	Average	Minimum
Tuition and University fees	\$ 865	\$ 865
Miscellaneous fees	35	35
Room	330	186
Board	600	500
Books	150	115
Instruments (see below)	350	350
Laundry	75	35
	\$2,405	\$2,086

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered.

STUDENTS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is registered.

Students prevented by conscientious scruples from complying with academic requirements which may be fulfilled only upon days set apart by their church for religious observance should make application to the Dean for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems

proper, and, subject to the reserved power of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing and not subject to discipline who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean. Students withdrawing must notify the Registrar immediately.

The Dean of the School may, for reasons of weight, grant a leave of absence to a stu-

dent in good standing.

REQUIREMENTS FOR PROMOTION

1. A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

2. The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions

of study in the school.

Students are classified for readmission or promotion under the following headings:

I. Recommended for advancement.

- II. Recommended for readmission to the same class.
- III. Recommended neither for advancement nor for readmission to the same class:
 - a) Because of failure.
 - b) Because they fall under paragraph 2 of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GRADUATION

Commencement occurs in June, at which time all recipients of degrees awarded during the academic year are expected to attend the exercises. Diplomas are issued in June or at various times during the year.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of

\$1.00 each time that a candidate chooses to come up for consideration, within a period not to exceed three years. Thereafter with the filing of a second application the regular fee of \$20 is again payable.

Dates for the filing of applications are given in the Academic Calendar at the beginning

of this Announcement.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

Candidates for admission must be women between the ages of eighteen and thirty-five years and most present a record of good health. All candidates are required to make formal application in writing on blanks supplied by the School. After the application has been submitted, the academic record of the candidate should be sent to the School at the request of the candidate. Wherever possible, a personal interview is required before the candidate

is accepted.

Applicants must satisfy the following requirements: Two years of sixty semester hours of credit in liberal arts from a college or university approved by Columbia University. The following subjects are required:

•	Semester Hours
English	6
Biological science or chemistry	3
Sociology or psychology	3

Upon the successful completion of the two-year curriculum in dental hygiene, the

Bachelor of Science degree will be conferred.

Applicants who lack not more than eight credits of the sixty credits required for admission will be considered for matriculation on the condition that the eight credits be earned during the Summer Session between the Junior and Senior years.

For further information address the Director, Courses for Dental Hygienists, 630 West

168th Street, New York 32, N.Y.

SHORT COURSES FOR GRADUATES IN DENTISTRY

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1953–1954 short refresher courses

will be offered in various subjects.

Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

CERTIFICATE OF TRAINING

The School of Dental and Oral Surgery is authorized to grant certificates of training in special branches of dentistry. The course of study for the certificate of training includes

not less than thirty credits of special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodomtics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, orthodomtics, pedodontics, and periodontology. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the Announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health, 600 West 169th Street, New York 32, N.Y.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examinations should be completed at least thirty days before the examinations begin.

The State Department of Éducation will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

CURRICULUM

1953-1954

Subjects*	Lecture or Seminar Hours	Lab. or Clinic Hours	Total Hours
FIRST YEAR			
Anatomy			
Embryology 152 F	18		18
Gross 151 FS	50	222	272
Microscopic 150 FS	42	126	168
Neuro 153 T	30	36	66
Oral 101 ST	19	82	101
Biochemistry 150 ST	38	117	155
Histology, Oral 115 ST	25	52	77
Physiology 150 FS	56	152	208
Theory and Practice			
Dental History 287 T	10		10
•			1,075

^{*} Letter following course number designates trimester: $F \equiv$ first, $S \equiv$ second, and $T \equiv$ third.

	Lecture or Seminar	Lab. or Clinic	Total
Subjects*	Hours	Hours	Hours
SECOND YEAR			
Crown and Bridge 105 ST	20	184	20.4
Dental Materials 126 FS	10	56	66
Microbiology 151 F and 152 F	43	99	142
Operative Dentistry 131 FST	20	187	207
Pathology 150 FS	54	141	195
Periodontology 151 T	10	44	54
Pharmacology 150 ST	55	33	88
Prosthetic Dentistry 157 FST	20	198	218
Psychiatry 150 S	11		11
Surgery, Principles 168 ST	10		10
Surgery, Oral 270A ST	10		10
Theory and Practice			}
Therapeutics 286 T	10		10
			1,215
THIRD YEAR			
Anatomy, Applied 252 S Crown and Bridge	10		10
Technique 205 F		96	96
Clinic 206 ST	10	114	1
Applied Occlusal Dynamics 212 T	10	30	30
Diagnosis 212 FST	30	3 [♥] 25	55
Operative Dentistry 233 FST	10	276	286
Orthodontics 241 F	20	60	80
Pathology, Oral 246 FS	20	60	80
Periodontology 251 S		30	30
Practice of Medicine 278 ST	40	22	62
Prosthetic Dentistry 260 FST and 261 FST	20	177	197
Radiology 267 F	10	15	25
Surgery, Oral 270B F	10	20	30
			1,105
FOURTH YEAR			
Crown and Bridge 210 FST and 211 FST	10	165	175
Diagnosis 213 F		25	25
Diagnosis Seminar 214 S		30	30
Diagnosis 215 T (continuation of 214)	10		10
Orthodontics 242 FST		30	30
Operative Dentistry 234 FST	20	305	325
Pedodontics 202 FST	10	87	97
Periodontology 252 FS and 253 FS	20	30	50
Prosthetic Dentistry 263 FST and 264 FST	10	165	175
Public Health 222 S	20	6	20
Surgery, Oral 272 FST Surgery Seminar 274 T	40	60	100
Surgical Prosthesis 265 T	10		10
Theory and Practice		30	30
Dental History 283 F Ethics, Jurisprudence and Practice Man-	10		10
agement 281 FST Comprehensive 285 T	30		30
•			1,117

^{*} Letter following course number designates trimester: $F \equiv$ first, $S \equiv$ second, and $T \equiv$ third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 14 and 15 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150-Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152-Embryology. Freshman year.

Lectures and demonstration dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153-Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Applied anatomy of the head and neck. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150-Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126-Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of Diagnosis 212.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of Diagnosis 214.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with Microbiology 105F in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 131-Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures and conferences on operative dental procedures for children and management of child dental patients.

PERIODONTOLOGY

Periodontology 151—Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150—Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY

Physiology 150—Mammalian physiology. Freshman year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 150—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222-Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental public health practice are emphasized.

RADIOLOGY

Radiology 267-Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 281—Dental ethics, jurisprudence, and practice management. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Dental history. Senior year.

Lecture and conference course. The development of the scientific principles of modern dentistry is discussed.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lecture and conference course. The development of the scientific principles of modern dentistry is discussed.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

- Anatomy: Gross anatomy: One of the following three: Stedman, Gould, Dorland, or American, Medical Dictionary; Cunningham, Manual of Practical Anatomy, Vols. II and III; mimeographed Dissecting Directions; one of the following four: Grant, Atlas of Anatomy; Truex and Kellner, Detailed Atlas of the Head and Neck; Spalteholz, Hand Atlas of Human Anatomy; or Anson, Atlas of Human Anatomy.
 - APPLIED ANATOMY: Shapiro, Applied Anatomy of the Head and Neck (2d ed.).
 - EMBRYOLOGY: One of the following three: Arey, Developmental Anatomy; Hamilton, Human Embryology; or Patten, Human Embryology.
 - MICROSCOPIC ANATOMY: Bailey, Textbook of Histology (12th ed.); mimeographed laboratory manual.
 - NEUROANATOMY: Strong and Elwyn, Human Neuroanatomy; mimeographed laboratory manual.
 - ORAL HISTOLOGY AND EMBRYOLOGY: Orban, Oral Histology and Embryology; Diamond, Dental Anatomy.
- BIOCHEMISTRY: Harrow, Textbook of Biochemistry (5th ed.); Karshan, Laboratory Manual of Biochemistry for Dental Students.
- DENTAL ETHICS AND PRACTICE MANAGEMENT: McGehee and Walker, Dental Practice Management.
- Dental Therapeutics: Council on Therapeutics, American Dental Association, Accepted Dental Remedies; McGehee and Green, Pharmacology and Pharmacotherapeutics for Dentists.
- Diagnosis: Ziskin et al., Differential Diagnosis; Ziskin, Pulp Symptomatology (1943 ed.); Thoma, Oral Pathology (3d ed.).
- MEDICINE: Yater, Fundamentals of Internal Medicine (3d rev. ed.).
- Microbiology: Jordan and Burrows, Textbook of Bacteriology (15th ed.); Laboratory Manual in Microbiology and Immunology.
- OPERATIVE DENTISTRY: Black, Operative Dentistry, Vols. II and III; Operative Dentistry Syllabus; Grossman, Root Canal Therapy.
- Oral Pathology: Thoma, Oral Pathology (3d ed.); or Kronfeld, Histopathology of the Tecth (3d ed.).
- ORTHODONTICS: Salzman, Principles of Orthodontics.
- Pathology: One of the following four: Boyd, Textbook of Pathology; Karsner, Textbook of Pathology; Moore, Textbook of Pathology; or Anderson's Pathology.
- PEDODONTICS: McBride, Juvenile Dentistry (4th ed. or later).

Periodontology: Goldman, Periodontia.

PHARMACOLOGY: Goodman and Gilman, Pharmacological Basis of Therapeutics (1951).

Physiology: One of the following six: Wiggens, Physiology in Health and Disease (5th ed.); Fulton, Textbook of Physiology (16th ed.); Starling, Human Physiology (16th ed.); Best and Taylor, Physiological Basis of Medical Practice (1950); Bard, Macleod's Physiology in Modern Medicine (9th ed.); or Houssay, Human Physiology; and Physiology Laboratory Manual.

PROSTHETIC DENTISTRY: Skinner, Science of Dental Materials; Swenson, Complete Dentures; Tylman, Crown and Bridge Prosthesis; United States Government Printing Office, Physical Properties of Dental Materials; Young et al., Syllabus on Complete Dentures.

PSYCHIATRY: Strecker, Fundamentals of Psychiatry (4th ed.).

RADIOLOGY: McCall and Wald, Clinical Dental Roentgenology (3d ed.).

Surgery: Berger, Principles and Technique of Oral Surgery; Berger, Principles and Technique of the Removal of Teeth; Parker, Synopsis of Traumatic Injuries of the Face and Jaw.

SURGICAL PROSTHESIS: O. E. Beder, Surgical and Maxillofacial Prosthesis.

STUDENT ORGANIZATIONS

REGISTRATION OF STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 per cent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

FACILITIES

LIBRARY

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately one hundred and eighty thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-two hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They

include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the University libraries, Gymnasium, and other activities.

University Gymnasium.—The Gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the Gymnasium, baths, and private lockers. A service charge for physical education, amounting to one dollar (\$1.00) per session (Winter, Spring, or Summer), is charged each student using the facilities of the University Gymnasium without formal registration in physical education courses. In addition a deposit must be made of two dollars (\$2.00) for a lock, locker, and towel.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2nd Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5:00 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home, and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the Counselor to Protestant Students, the Counselor to Roman Catholic students, and the Counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence Halls Announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University Residence Hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

Recipients of University financial aid in excess of tuition, whether in the form of fellowships, scholarships, or other grants, will be asked to reside in the University Residence Halls unless exempted by the appropriate Dean with the approval of the President upon the presentation of adequate reasons for living elsewhere.

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

See also "Graduate Courses in the Basic Sciences" on page 13.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a Senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the Faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the Senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the Faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

STUDENT LOANS

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the Office of the Bursar, 310 University Hall. Applications for loans for the Winter Session should be filed by September 15; for the Spring Session, by January 15.

STUDENT EMPLOYMENT

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

OFFICERS OF INSTRUCTION

HAROLD A. ABRAMSON, Assistant Clinical Professor of Physiology; A.B., Columbia, 1920; M.D., 1923 THOMAS H. ALLEN, Associate Professor of Physi-

ology; A.B., Iowa, 1936; Ph.D., 1941

FRANZ ALTMANN. Associate Clinical Professor of Otolaryngology; M.D., Vienna, 1925

VIRGINIA APGAR, Professor of Anesthesiology; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933

EDMUND APPLEBAUM, Associate Professor of Dental Anatomy; D.D.S., New York College of Dentistry, 1922

HOWARD ARDEN, Assistant Professor of Dentistry; B.S., Fordham, 1943; D.D.S., Columbia, 1946 HERBERT D. AYERS, Jr., Assistant Clinical Professor

of Dentistry; A.B., Columbia, 1929; D.D.S., 1931 MARGARET W. BARNARD, Associate Professor of Public Health Practice; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

HENRY A. BARTELS, Assistant Professor of Oral Pathology; B.S., Rhode Island State, 1917; B.S.,

Columbia, 1925; D.D.S., 1927 HERBERT BARTELSTONE, Assistant Professor of Pharmacology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

FRANK E. BEUBE, Clinical Professor of Dentistry;

L.D.S., D.D.S., Toronto, 1930

HAROLD W. BROWN, Associate Dean (Public Health); Director, School of Public Health; Professor of Parasitology; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936 JACK BUDOWSKY, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1943

THEODORE BUNDRANT, Assistant Clinical Professor of Dentistry; D.D.S., Howard, 1929

LESTER R. CAHN, Associate Professor of Oral Pathology; D.D.S., New York College of Dentistry, 1918 EDWARD A. CAIN, JR., Associate Professor of

Dentistry; B.S., Fordham, 1942; D.D.S., Columbia, 1945

NEAL W. CHILTON, Assistant Professor of Dental Public Health Practice; B.S., College of the City of New York, 1939; D.D.S., New York University,

1943; M.P.H., Columbia, 1946

LOUIS J. CIZEK, Assistant Professor of Physiology; B.S., Fordham, 1937; M.D., Columbia, 1941 E. GURNEY CLARK, Professor of Epidemiology;

A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944 HANS T. CLARKE, Professor of Biochemistry; B.Sc.,

London, 1908; D.Sc., 1914 LOUIS A. COHN, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928

ROBERT W. COON, Assistant Professor of Pathology;

B.S., North Dakota, 1942; M.D., Rochester, 1944 WILFRED M. COPENHAVER, Professor of Anatomy; A.B., Western Maryland, 1921; Ph.D., Yale, 1925

JOSEPH A. CUTTITA, Assistant Professor of Dentistry; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939

SAMUEL R. DETWILER, Professor of Anatomy; Ph.B., Yale, 1914; A.M., 1916; Ph.D., 1918; M.S. (hon.), 1931

NICHOLAS DISALVO, Assistant Professor of Physiology; D.D.S., Columbia, 1945; Ph.D., 1952 ADOLPH ELWYN, Associate Professor of Neuro-

anatomy; B.S., Columbia, 1915; A.M., 1917

EARL T. ENGLE, Professor of Anatomy; A.B., Nebraska Wesleyan, 1920; A.M., Colorado, 1924; Ph.D., Stanford, 1925

JOHN W. FERTIG, Professor of Biostatistics; A.B., Ursinus, 1931; Ph.D., Minnesota, 1935

MORRIS FIERSTEIN, Associate Clinical Professor of Dentistry; D.D.S., Columbia, 1921

JOSEPH E. FLYNN, Associate Professor of Pathology; A.B., Columbia (Iowa), 1933; M.D., Iowa, 1938

LEW'IS FOX, Assistant Clinical Professor of Dentistry; D.D.S., Maryland, 1927

HARRY A. GALTON, Associate Clinical Professor of Dentistry; D.D.S., Columbia, 1932

ALFRED GILMAN, Professor of Pharmacology; B.S.,

Yale, 1928; Ph.D., 1931

LEONARD J. GOLDWATER, Professor of Occupational Medicine; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941

ROBERT GOTTSEGEN, Assistant Professor of Dentistry; A.B., Michigan, 1939; D.D.S., Columbia,

1943

MAGNUS I. GREGERSEN, Dalton Professor of Physiology; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930

ROBERT E. HERLANDS, Associate Professor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944

MAURICE J. HICKEY, Associate Dean (Dental and Oral Surgery); Professor of Oral Surgery; D.M.D., Harvard, 1932; M.D., Columbia, 1937

GEORGE W. HINDELS, Assistant Clinical Professor of Dentistry; M.D., Vienna, 1938; D.D.S., Columbia, 1943

LEONARD HIRSCHFELD, Assistant Clinical Professor of Dentistry; A.B., Columbia, 1941; D.D.S.,

FRANKLIN HOLLANDER, Assistant Clinical Professor of Physiology; B.S., Columbia, 1919; Ph.D., 1923 HOUGHTON HOLLIDAY, Professor of Dentistry; A.B., Minnesota, 1915; D.D.S., 1917; D.D.S.

(hon.), Montreal, 1945

IRVIN L. HUNT, JR., Associate Professor of Dentis-

try; D.D.S., Pennsylvania, 1929 ALVIN R. JACOBSON, Associate Professor of Sanitary Science; B.S., North Dakota, 1935; M.S., 1937;

Ph.D., Iowa, 1941 DOROTHY D. JOHNSON, Assistant Professor of Anatomy; A.B., Bates, 1941; A.M., Vassar, 1943; Ph.D., Columbia, 1949

ELVIN A. KABAT, Professor of Microbiology; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937

MAXWELL KARSHAN, Associate Professor of Biochemistry; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925

BARNET M. LEVY, Professor of Dentistry; A.B., Pennsylvania, 1938; D.D.S., 1942; M.S., Virginia,

NOLAN D. C. LEWIS, Professor of Psychiatry; M.D., Maryland, 1914

GEORGE F. LINDIG, Associate Clinical Professor of Dentistry; D.D.S., Minnesota, 1924

JOHN J. LUCCA, Assistant Professor of Dentistry; A.B., New York University, 1941; D.D.S., Columbia, 1947

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¹ On leave 1953-1954 (military service).

² On leave 1953-1954.

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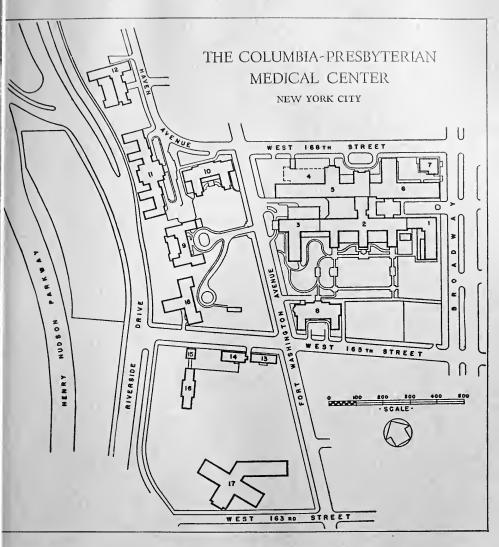
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¹ On leave 1953-1954 (military service).







- 1. Babies Hospital
- Presbyterian Hospital Sloane Hospital New York Orthopaedic Hospital
- 3. Harkness Pavilion
- 4. Power plant
- 5. College of Physicians and Surgeons
- 6. Vanderbilt Clinic
 - School of Dental and Oral Surgery
- Washington Heights Health and Teaching Center, New York City Department of Health
 - School of Public Health

- 8. Institute of Ophthalmology
- 9. Maxwell Hall
- 10. Neurological Institute
- 11. New York State Psychiatric Institute and Hospital
- 12. Bard Hall
- 13, 16. Storage
- 14. Shops
- 15. Housing
- 17. Francis Delafield Hospital, New York City Department of Hospitals
- 18. Edward S. Harkness Memorial Hall



KING'S COLLEGE COLUMBIA COLLEGE

COLUMBIA

UNIVERSITY
IN THE
CITY OF NEW YORK

BICENTENNIAL YEAR 1954

COLUMBIA UNIVERSITY BULLETIN OF INFORMATION

Fifty-fourth Series, No. 26

July 10, 1954



SCHOOL OF DENTAL AND ORAL SURGERY

OF THE

FACULTY OF MEDICINE

1954-1955

COLUMBIA-PRESBYTERIAN MEDICAL CENTER
630 WEST 168TH STREET · NEW YORK 32, N.Y.

Columbia University Bulletin of Information

Fifty-fourth Series, No. 26

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July 10, 1954

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The series includes the Report of the President to the Trustees and the Announcements of the several Colleges and Schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these Announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 5,100—1954

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3–2500.

Announcements

The Announcements of each College or School and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this Announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

PRINTED FOR THE UNIVERSITY BY COLUMBIA UNIVERSITY PRESS

CONDENSED ACADEMIC CALENDAR

1954

September 7 Tuesday, and September 8, Wednesday. Registration, including payment of fees. September 13 Monday. Classes begin. November 2 Tuesday, Election Day, Holiday, November 25 Thursday. Thanksgiving Day. Holiday. November 27 Saturday. End of first trimester. November 29 Monday. Beginning of second trimester. December 20 Monday, through 1955 January 2 Sunday. Christmas Holidays. February 12 Saturday. Lincoln's Birthday. Not a University Holiday. 22 Tuesday. Washington's Birthday. Holiday. February Saturday. End of second trimester. February 26 Monday. Beginning of third trimester. February 28 Tuesday. Last day for filing application or renewal of application for all March 1 degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee. April 3 Sunday, through April 10, Sunday. Easter Holidays. May 21 Saturday. Last day of classes. May 23 Monday, through May 27, Friday. Final examinations. May 30 Monday. Memorial Day. Holiday.

Wednesday. Conferring of degrees.

June

1



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THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

From its inception, the program of dental education at Columbia University has been fostered by and associated with the University's School of Medicine. The Faculty of Medicine at its stated meetings of November and December, 1915, recommended to the Trustees that a dental school be established in the University on "University Lines."

The President of the University in his annual report of 1916 informed the Trustees that "during the year a group of men have come forward with a well-supported proposal that there be established in connection with the Medical School, a school for the training of dental surgeons." The President also reported that "the project was carefully formulated and presented to the Medical Faculty and received the formal approval of that Faculty and later of the Trustees."

In May, 1916, the University issued a pamphlet entitled A Dental School on University Lines. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed:

Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine.

In the fall of 1917 James N. Jarvie gave a substantial sum to a fund "to found and maintain the proposed dental school of the University, described in the pamphlet entitled A Dental School on University Lines issued by Columbia University, May 1916."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and from date the School became an integral part of the University. On March 1, 1920, the dental building adjacent to the School of Medicine and Vanderbilt Clinic was finished and assigned to the use of this School.

On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University. By this merger Columbia acquired two large buildings, at 302–306 East 35th Street and 309–315 East 34th Street, in which the School was housed up to the time of moving into the Medical Center.

The merging of the schools did not alter the University's policy for dental education. In the 1923–1924 Announcement of the School of Dental and Oral Surgery this policy was reaffirmed by the statement, "It is the purpose of the School of Dental and Oral Surgery to combine in the highest degree practicable a sound knowledge of the fundamentals of medicine with adequate training in the technical procedures of dental science and arts."

In September, 1928, the School was moved to the Columbia University-Presbyterian

Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the School, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the Faculties of the two schools were merged July 1, 1945. This Faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the Faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School of Dental and Oral

Surgery.

REQUIREMENTS FOR ADMISSION, PROMOTION AND GRADUATION

ADMISSION TO THE FIRST YEAR OF THE SCHOOL OF DENTAL AND ORAL SURGERY

Application.—It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York

State Board of Regents:

	Semester Hours
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within ten days after notification of acceptance

(see page 9).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Columbia College.—Upon receiving ninety-four points credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above. This combined course with Columbia College is being discontinued for students entering Columbia College in September 1954 and thereafter.

Combined courses with Barnard College.—Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard

College.

Combined courses with the School of General Studies.—Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine.—It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one Summer Session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar and file a registration blank giving such information as may be required. The periods set aside for registration in each session are stated in the Academic Calendar at the beginning of this Announcement. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University Statutes provide that tuition fees and the University fee are payable semiannually in advance. No reduction is made for late registration. Registration will not be complete until such fees are paid. Checks should be drawn to the order of Columbia University and presented in person or mailed to the Office of the Bursar. Payment of fees after the last day of registration (see the Academic Calendar) imposes automatically the statutory charge of \$3.00 for the privilege. Under the regulations, the privileges of the University are not available to any student until he has completed his registration.

The fees to be paid by students are subject to change at any time at the discretion of the Trustees.

The following annual fees are prescribed for dental students:

a) University Fee

 For each Winter or Spring Session or any part thereof, for students enrolled for:

One to four points, inclusive \$ 5.00

More than four points to nine points, inclusive 10.00

More than nine points 20.00

2. For registration as engaged in research only, for any period not longer than a Winter or a Spring Session.

b) Tuition Fee

For the course in dentistry for one academic year (or equivalent) in the case of a student enrolled for the full course, payable in two installments 825.00 For students not enrolled for the full course, fees are to be assessed by the Registrar as provided by the University Statutes.

c) Fee for application for a degree

20.00

20.00

3.00

d) Privileges

- Late registration or late application for a degree or for deficiency or special examinations
- 2. Deficiency or special examinations 3.00
- 3. Renewal of application for any degree 1.00

e) Student Health Service Fee

This fee will be used to pay the annual premiums of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the student health service.

student health service.

For all students, per academic year 25.00

f) Case rental

For Sophomores, Juniors, and Seniors, rental for one instrument case, for one academic year, payable in two installments

5.00

g) Rebates

- The University fee, the student health service fee, and the fee for application for any degree shall not be subject to rebate.
- 2. No tuition fee shall be returned for any course which the student may for any reason discontinue. Exception to this rule may be made only in cases of total withdrawal from the University, when a partial return of fees may be authorized by the Registrar.
- 3. When a rebate is allowed for the discontinuance of courses or withdrawal from the University, such rebate will be reckoned from the day upon which the Registrar receives notice from the student.

h) Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance fee.—Within ten days after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the School for the specific session, it will not be returned. If he registers at the School at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fee for processing of application.—A fee of \$5.00 is charged to every student who applies for admission to the School of Dental and Oral Surgery or the School of Medicine. This fee covers the cost of processing the application.

Fees for repeated courses.—Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies.—Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and

regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes.—All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers.—Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the School.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon the rates which prevailed during 1953–1954 and can be accepted as applicable in general for the year 1954–1955 unless national economic changes require their alteration.

	Average	Minimum
Tuition and University fees	\$ 865	\$ 865
Miscellaneous fees	35	35
Room	330	186
Board	600	500
Books	150	115
Instruments (see below)	375	350
Laundry	75	35
	\$2,430	\$2,086

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered.

STUDENTS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is registered.

Students prevented by conscientious scruples from complying with academic require-

ments which may be fulfilled only upon days set apart by their church for religious observance should make application to the Dean for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper, and, subject to the reserved power of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing and not subject to discipline who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean. Students withdrawing must notify the Registrar immediately.

The Dean of the School may, for reasons of weight, grant a leave of absence to a stu-

dent in good standing.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions

of study in the school.

Students are classified for readmission or promotion under the following headings:

- 1. Recommended for advancement.
- 2. Recommended for readmission to the same class.
- 3. Recommended neither for advancement nor for readmission to the same class:
 - (a) Because of failure.
 - (b) Because they fall under paragraph 2 of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their

equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GRADUATION

Commencement occurs in June, at which time all recipients of degrees awarded during the academic year are expected to attend the exercises. Diplomas are issued in June or at various times during the year.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time

work.

An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of \$1.00 each time that a candidate chooses to come up for consideration, within a period not to exceed three years. Thereafter, with the filing of a second application the regular fee of \$20 is again payable.

Dates for the filing of applications are given in the Academic Calendar at the beginning

of this announcement.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

Candidates for admission must be women between the ages of eighteen and thirty-five years and must present a record of good health. All candidates are required to make formal application in writing on blanks supplied by the School. After the application has been submitted, the academic record of the candidate should be sent to the School at the request of the candidate. Whenever possible, a personal interview is desirable before the

candidate is accepted.

Applicants must satisfy the following requirements: Two years of sixty semester hours of credit in liberal arts from a college or university approved by Columbia University. The following subjects are required:

	semester Hours
English	6
Biological science or chemistry	3
Sociology or psychology	3

Upon the successful completion of the two-year curriculum in dental hygiene, the Bachelor of Science degree will be conferred.

Applicants who lack not more than eight credits of the sixty credits required for admission will be considered for matriculation on the condition that the eight credits be earned during the Summer Session between the Junior and Senior years.

For further information address the Director, Courses for Dental Hygienists, 630 West

168th Street, New York 32, N.Y.

SHORT COURSES FOR GRADUATES IN DENTISTRY

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1954–1955 short refresher courses will be offered in various subjects.

Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

CERTIFICATE OF TRAINING

The School of Dental and Oral Surgery is authorized to grant certificates of training in special branches of dentistry. The course of study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology. For further information see the Announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the Announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health, 600 West 168th Street, New York 32, N.Y.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examinations should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small sections, conferences, and the comprehensive case method of instruction.

CURRICULUM

1954-1955

Subjects*	Lecture or Seminar Hours	Lab. or Clinic Hours	Total Hours
FIRST YEAR			
Anatomy			
Embryology 152 F	18		18
Gross 151 FS	50	222	272
Microscopic 150 FS	42	126	168
Neuro 153 T	30	36	66
Oral 101 ST	19	82	101
Biochemistry 150 ST	38	117	155
Histology, Oral 115 ST	25	52	77
Physiology 150 FS	56	152	208
Theory and Practice			
Dental History 287 T	10		10
			1,075

^{*} Letter following course number designates trimester: F = first, S = second, and T = third.

	Lecture	7 -7	
	or	Lab. or	
	Seminar	Clinic	Total
Subjects*	Hours	Hours	Hours
SECOND YEAR			
Crown and Bridge 105 ST	20	184	204
Dental Materials 126 FS	10	56	66
Microbiology 151 F and 152 F	43	99	142
Operative Dentistry 131 FST	20	187	207
Pathology 150 FS	54	141	195
Periodontology 151 T	10	44	54
Pharmacology 150 ST	55	33	88
Prosthetic Dentistry 157 FST	20	198	218
Psychiatry 150 S	11		11
Surgery, Principles 168 ST	10		10
Surgery, Oral 270A ST	10		10
Theory and Practice	Ì		
Therapeutics 286 T	10		10
-			1,215
THIRD YEAR			
Anatomy, Maxillofacial 252 S	10		10
Crown and Bridge			
Technique 205 F		96	96
Clinic 206 ST	10	114	124
Applied Occlusal Dynamics 212 T		30	30
Diagnosis 212 FST	30	25	55
Operative Dentistry 233 FST	10	276	286
Orthodontics 241 F	20	60	80
Pathology, Oral 246 FS	20	6o	80
Periodontology 251 S		30	30
Practice of Medicine 278 ST	40	22	62
Prosthetic Dentistry 260 FST and 261 FST	20	177	197
Radiology 267 F	10	15	25
Surgery, Oral 270B F	10	20	30
			1,105
FOURTH YEAR			
Crown and Bridge 210 FST and 211 FST	10	165	175
Diagnosis 213 F		25	25
Diagnosis Seminar 214 S		30	30
Diagnosis 215 T (continuation of 214)	10		10
Orthodontics 242 FST		30	30
Operative Dentistry 234 FST	20	305	325
Pedodontics 202 FST	10	87	97
Periodontology 252 FS and 253 FS	20	30	50
Prosthetic Dentistry 263 FST and 264 FST	10	165	175
Public Health 222 S	20		20
Surgery, Oral 272 FST	40	60	100
Surgery Seminar 274 T	10		10
Surgical Prosthesis 265 T		30	30
Theory and Practice			
Clinical Oral Physiology 283 F	10		10
Ethics, Jurisprudence and Practice Ad-			
ministration 281 FST	30		30
Comprehensive 285 T			
			1,117

^{*} Letter following course number designates trimester: F = first, S = second, and T = third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of cleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 15 and 16 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150-Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstration dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252—Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150-Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213-Dental diagnosis clinic. Senior year.

Continuation of clinic of Diagnosis 212.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of Diagnosis 214.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 131-Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filing of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234-Advanced clinical practice. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241-Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures and conferences on operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151-Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252-Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253-Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150—Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY

Physiology 150-Mammalian physiology. Freshman year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211-Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212-Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264-Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 150—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222—Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental public health practice are emphasized.

RADIOLOGY

Radiology 267-Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

Anatomy: Gross anatomy: One of the following three: Gray's Anatomy; Cunningham, Textbook of Anatomy; or Morris, Human Anatomy; one of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, Manual of Practical Anatomy, Vols. II and III; one of the following four: Grant, Atlas of Anatomy; Truex and Kellner, Detailed Atlas of the Head and Neck; Spalteholz, Hand Atlas of Human Anatomy; or Anson, Atlas of Human Anatomy.

MAXILLOFACIAL ANATOMY: Shapiro, Applied Anatomy of the Head and Neck (1954 ed.)

EMBRYOLOGY: One of the following three: Arey, Developmental Anatomy; Hamilton, Human Embryology; or Patten, Human Embryology.

MICROSCOPIC ANATOMY: Bailey, Textbook of Histology (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, Human Neuroanatomy; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, Oral Histology and Embryology; Diamond, Dental Anatomy.

BIOCHEMISTRY: Harrow and Mazur, Textbook of Biochemistry (6th ed.); Karshan, Laboratory Manual of Biochemistry for Dental Students.

DENTAL ETHICS, JURISPRUDENCE, AND PRACTICE ADMINISTRATION: Regan, The Doctor, the Patient and the Law.

Dental Therapeutics: Council on Therapeutics, American Dental Association, Accepted Dental Remedies; McGehee and Green, Pharmacology and Pharmacotherapeutics for Dentists.

Diagnosis: Thoma, Oral Pathology (3d ed.).

MEDICINE: One of the following three: Yater, Fundamentals of Internal Medicine (3d rev. ed.); Comroe, Collins, and Crane, Internal Medicine in Dental Practice (4th ed.); or Cecil and Loeb, Textbook of Medicine (8th ed.).

Microbiology: Laboratory Manual in Microbiology and Immunology; Smith and Conant, Zinsser's Textbook of Bacteriology (10th ed.).

OPERATIVE DENTISTRY: Black, Operative Dentistry, Vols. II and III; Operative Dentistry Syllabus; Grossman, Root Canal Therapy.

Oral Pathology: Thoma, Oral Pathology (3d ed.); or Kronfeld, Histopathology of the Teeth (3d ed.).

ORTHODONTICS: Salzmann, Principles of Orthodontics.

Pathology: One of the following four: Boyd, Textbook of Pathology; Karsner, Textbook of Pathology; Moore, Textbook of Pathology; or Anderson, Pathology.

PEDODONTICS: McBride, Juvenile Dentistry (5th ed.).

Periodontology: Beube, Periodontology; and Goldman, Periodontia.

PHARMACOLOGY: Goodman and Gilman, Pharmacological Basis of Therapeutics (1954).

Physiology: Bard, Macleods Physiology in Modern Medicine (10th ed.).

PROSTHETIC DENTISTRY: Skinner, Science of Dental Materials; Swenson, Complete Dentures; Tylman, Crown and Bridge Prosthesis; United States Government Printing Office, Physical Properties of Dental Materials; Young et al., Syllabus on Complete Dentures.

PSYCHIATRY: Strecker, Fundamentals of Psychiatry (5th ed.).

RADIOLOGY: McCall and Wald, Clinical Dental Roentgenology (3d ed.).

Surgery: Berger, Principles and Technique of Oral Surgery; Berger, Principles and Technique of the Removal of Teeth; Parker, Synopsis of Traumatic Injuries of the Face and Jaw.

Surgical Prosthesis: Beder, Surgical and Maxillofacial Prosthesis.

STUDENT ORGANIZATIONS

REGISTRATION OF STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

FACILITIES

LIBRARY

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-three hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They

include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post

their hours of opening.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the University libraries, gymnasium, and other activities.

University gymnasium.—The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge for physical education, amounting to one dollar (\$1.00) per session (Winter, Spring, or Summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. In addition a deposit must be made of two dollars (\$2.00) for a lock, locker, and towel.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2nd Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5:00 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the Counselor to Protestant Students, the Counselor to Roman Catholic students, and the Counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves

with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence halls announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th

Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University residence hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

FELLOWSHIPS, SCHOLARSHIPS, AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

See also "Graduate Courses in the Basic Sciences" on page 13.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a Senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the Faculty, is most

proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the Senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the Faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

STUDENT LOANS

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar, Applications for loans for the Winter Session should be filed by September 15; for the Spring Session, by January 15.

STUDENT EMPLOYMENT

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

OFFICERS OF INSTRUCTION

HAROLD A. ABRAMSON, Assistant Clinical Professor of Physiology; A.B., Columbia, 1920; M.D., 1923 THOMAS H. ALLEN, Associate Professor of Physi-

ology; A.B., Iowa, 1936; Ph.D., 1941

FRANZ ALTMANN, Associate Clinical Professor of Otolaryngology; M.D., Vienna, 1925

VIRGINIA APGAR, Professor of Anesthesiology; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933 EDMUND APPLEBAUM, Associate Professor of Dental Anatomy; D.D.S., New York College of Dentistry, 1922

HOWARD ARDEN, Assistant Professor of Dentistry; B.S., Fordham, 1943; D.D.S., Columbia, 1946

HERBERT D. AYERS, JR., Assistant Clinical Professor of Dentistry; A.B., Columbia, 1929; D.D.S., 1931 MARGARET W. BARNARD, Associate Professor of

Public Health Practice; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

HENRY A. BARTELS, Assistant Professor of Oral Pathology; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927

HERBERT BARTELSTONE, Assistant Professor of Pharmacology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945 FRANK E. BEUBE, Clinical Professor of Dentistry;

L.D.S., D.D.S., Toronto, 1930

HAROLD W. BROWN, Associate Dean (Public Health); Director, School of Public Health; Professor of Parasitology; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936

JACK BUDOWSKY, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1943

THEODORE BUNDRANT, Associate Clinical Professor of Dentistry; D.D.S., Howard, 1929

LESTER R. CAHN, Associate Professor of Oral Pathology; D.D.S., New York College of Dentistry, 1918 EDWARD A. CAIN, JR., Associate Professor of Dentistry; B.S., Fordham, 1942; D.D.S., Columbia, 1945

¹NEAL W. CHILTON, Assistant Professor of Dental Public Health Practice; B.S., College of the City of New York, 1939; D.D.S., New York University, 1943; M.P.H., Columbia, 1946

LOUIS J. CIZEK, Assistant Professor of Physiology;

B.S., Fordham, 1937; M.D., Columbia, 1941 E. GURNEY CLARK, Professor of Epidemiology; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944

HANS T. CLARKE, Professor of Biochemistry; B.Sc.,

London, 1908; D.Sc., 1914 LOUIS A. COHN, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928

ROBERT W. COON, Associate Professor of Pathology; B.S., North Dakota, 1942; M.D., Rochester, 1944 WILFRED M. COPENHAVER, Professor of Anatomy; A.B., Western Maryland, 1921; Ph.D., Yale, 1925

JOSEPH A. CUTTITA, Assistant Professor of Dentistry; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939

SAMUEL R. DETWILER, Professor of Anatomy; Ph.B., Yale, 1914; A.M., 1916; Ph.D., 1918; M.S.

(hon.), 1931

NICHOLAS DISALVO, Assistant Professor of Physiology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952

ADOLPH ELWYN, Associate Professor of Neuroanatomy; B.S., Columbia, 1915; A.M., 1917

EARL T. ENGLE, Professor of Anatomy; A.B., Nebraska Wesleyan, 1920; A.M., Colorado, 1924; Ph.D., Stanford, 1925

JOHN W. FERTIG, Professor of Biostatistics; A.B., Ursinus, 1931; Ph.D., Minnesota, 1935

JOSEPH E. FIASCONARO, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1943

MORRIS FIERSTEIN, Associate Clinical Professor of

Dentistry; D.D.S., Columbia, 1921 JOSEPH E. FLYNN, Associate Professor of Pathology; A.B., Columbia (Iowa), 1933; M.D., Iowa, 1938

LEWIS FOX, Assistant Clinical Professor of Dentistry; D.D.S., Maryland, 1927

HARRY A. GALTON, Associate Clinical Professor of

Dentistry; D.D.S., Columbia, 1932 ALFRED GILMAN, Professor of Pharmacology; B.S., Yale, 1928; Ph.D., 1931

LEONARD J. GOLDWATER, Professor of Occupational Medicine; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941

ROBERT GOTTSEGEN, Assistant Clinical Professor of Dentistry; A.B., Michigan, 1939; D.D.S., Co-

lumbia, 1943

MAGNUS I. GREGERSEN, Dalton Professor of Physiology; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930

ROBERT E. HERLANDS, Associate Professor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944

MAURICE J. HICKEY, Associate Dean (Dental and Oral Surgery); Professor of Oral Surgery; D.M.D., Harvard, 1932; M.D., Columbia, 1937 GEORGE W. HINDELS, Assistant Clinical Professor

of Dentistry; M.D., Vienna, 1938; D.D.S., Columbia, 1943

LEONARD HIRSCHFELD, Assistant Clinical Professor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944

FRANKLIN HOLLANDER, Assistant Clinical Professor of Physiology; B.S., Columbia, 1919; Ph.D., 1923

HOUGHTON HOLLIDAY, Professor of Dentistry; A.B., Minnesota, 1915; D.D.S., 1917; D.D.S. (bon.), Montreal, 1945

IRVIN L. HUNT, JR., Associate Professor of Dentistry; D.D.S., Pennsylvania, 1929

ALVIN R. JACOBSON, Associate Professor of Sanitary Science; B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941

JAMES JAY, Assistant Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1940

DOROTHY D. JOHNSON, Assistant Professor of Anatomy; A.B., Bates, 1941; A.M., Vassar, 1943;

Ph.D., Columbia, 1949 ELVIN A. KABAT, Professor of Microbiology; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937

MAXWELL KARSHAN, Associate Professor of Biochemistry; B.S., College of the City of New York,

1917; A.M., Columbia, 1920; Ph.D., 1925 MORRIS KAVELLE, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1933

LAWRENCE C. KOLB, Professor of Psychiatry; M.D.,

Johns Hopkins, 1934 JOSEPH M. LEAVITT, Assistant Clinical Professor of

Dentistry; D.D.S., Columbia, 1940

¹ On leave 1954-1955 (military service).

BARNET M. LEVY, Professor of Dentistry; A.B., Pennsylvania, 1938; D.D.S., 1942; M.S., Virginia, 1944

GEORGE F. LINDIG, Associate Clinical Professor of

Dentistry; D.D.S., Minnesota, 1924

JOHN J. LUCCA, Assistant Professor of Dentistry; A.B., New York University, 1941; D.D.S., Columbia, 1947

IOHN D. MACLENNAN, Assistant Professor of Microbiology; M.B., Ch.B., Aberdeen, 1934; M.D., 1939 1WILLIAM J. MILLER, Assistant Clinical Professor of Dentistry; A.B., New York University, 1940; D.D.S., Columbia, 1943

MELVIN MORRIS, Assistant Clinical Professor of Dentistry; B.S., College of the City of New York,

1934; M.A., Columbia, 1937; D.D.S., 1941 WILLIAM L. NASTUK, Assistant Professor of Physiology; B.S., Rutgers, 1939; Ph.D., 1945

ALVIN S. NATHAN, Associate Clinical Professor of Dentistry; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938

JOHN L. NICKERSON, Professor of Physiology; B.A., Dalhousie, 1925; M.A., 1928; Ph.D., Princeton,

1935

CARL R. OMAN, Professor of Dentistry; D.D.S., Min-

nesota, 1914

ARMAND OPPENHEIMER, Assistant Clinical Professor of Dentistry; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929

DOUGLAS B. PARKER, Clinical Professor of Oral Surgery; M.D., Long Island College of Medicine, 1912; D.D.S., Pennsylvania, 1914

MAX A. PLEASURE, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928; M.S.P.H.,

Columbia, 1941

WILLARD C. RAPPLEYE, Dean, Faculty of Medicine; Vice President in Charge of Medical Affairs; Professor of Medical Economics; A.B., Illinois, 1915; M.D., Harvard, 1918; A.M., Yale, 1922; Sc.D., Trinity (hon.), 1939; Rutgers (hon.), 1949; Med.Sc.D., Women's Medical College of Pennsylvania (hon.), 1950

WILLIAM M. ROGERS, Assistant Professor of Anatomy; B.S., Georgia, 1921; Ph.D., Cornell, 1927

WALTER S. ROOT, Professor of Physiology; B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930

HARRY M. ROSE, John E. Borne Professor of Medical and Surgical Research; A.B., Yale, 1928; M.D., Cornell, 1932

GEORGE ROSEN, Professor of Public Health Education; B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947

SOLOMON N. ROSENSTEIN, Professor of Dentistry; B.S., College of the City of New York, 1929; D.D.S.,

Columbia, 1930

FRED ROTHENBERG, Assistant Clinical Professor of Dentistry; D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937

LOUIS A. SAPORITO, Assistant Clinical Professor of Dentistry; D.D.S., College of Dental and Oral Sur-

gery of New York, 1922

WILLIAM J. SAVOY, Associate Clinical Professor of

Dentistry; B.S., Manhattan, 1931; D.D.S., Columbia. 1935

SAUL SCHLUGER, Associate Clinical Professor of Dentistry; D.D.S., Louisville, 1931

JOSEPH SCHROFF, William Carr Professor of Oral Surgery; B.S., College of the City of New York, 1909; M.D., Columbia, 1920; D.D.S., 1922

L. LASZLO SCHWARTZ, Associate Clinical Professor

of Dentistry, D.D.S., Columbia, 1931 BEATRICE C. SEEGAL, Associate Professor of Microbiology; A.B., California, 1918; A.M., 1921; M.D.,

Johns Hopkins, 1924 HARRY H. SHAPIRO, Assistant Professor of Anatomy; D.M.D., Tufts, 1918

HAROLD SHERMAN, Assistant Clinical Professor of Dentistry; B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946

WILLIAM H. SILVERSTEIN, Assistant Clinical Professor of Dentistry; D.D.S., Maryland, 1937

GEORGE K. SMELSER, Associate Professor of Anatomy; A.B., Earlham, 1929; Ph.D., Chicago, 1932

GILBERT P. SMITH, Professor of Dentistry; D.D.S., Minnesota, 1927 HARRY P. SMITH, Delafield Professor of Pathology;

A.B., California, 1916; M.S., 1918; M.D., 1921 WILLIAM C. SPRING, DeLamar Professor of Public Health Practice; M.D., Duke University, 1936;

M.P.H., Columbia, 1947 LEO STERN, Sr., Clinical Professor of Dentistry; D.D.S., New York College of Dentistry, 1912

WELLINGTON B. STEWART, Associate Professor of Pathology; B.S., Notre Dame, 1942; M.D., Rochester, 1945

FRANCES A. STOLL, Associate Professor of Dental Hygiene; R. D. H., Columbia, 1934; B.S., 1944; A.M., 1945; Ed.D., 1949

LEWIS R. STOWE, Professor of Dentistry; D.D.S., Minnesota, 1916

DAVID TANCHESTER, Clinical Professor of Dentis-try; D.D.S., New York University, 1921 WILLIAM A. THEMANN, Assistant Clinical Profes-

sor of Dentistry, D.D.S., Columbia, 1927 ARTHUR C. TOTTEN, Professor of Dentistry;

D.D.S., Pennsylvania, 1926

FERDINAND A. TUOTI, Assistant Clinical Professor of Dentistry; D.M.D., Harvard, 1928

HARRY B. VAN DYKE, Hosack Professor of Pharmacology; B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923

WILLIAM A. VERLIN, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1931

WILLIAM W. WALCOTT, Associate Professor of Physiology; A.B., Yale, 1933; Ph.D., Columbia, 1944

SHIH-CHUN WANG, Professor of Physiology; B.S., Yenching, 1931; M.D., Peiping Union Medical Col-

lege, 1935; Ph.D., Northwestern, 1940 CLIFFORD L. WHITMAN, Assistant Clinical Professor of Dentistry; D.D.S., Maryland, 1927

EVELYN WITOL, Assistant Clinical Professor of Dentistry; D.M.D., Tufts, 1945

EDWARD V. ZEGARELLI, Associate Professor of Dentistry; A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

JACK ALLOY, D.D.S., Instructor in Dentistry NORMAN ALPERT, Ph.D., Instructor in Physiology BERT BALLIN, D.D.S., Assistant in Dentistry CARLISLE C. BASTIAN, D.D.S., Lecturer in Dentis-

1 On leave 1954-1955 (military service).

SAM M. BEISER, Ph.D., Associate in Microbiology JAMES W. BENFIELD, D.D.S., Instructor in Dentis-

MARC L. BERG, D.D.S., Assistant in Dentistry GERALD H. BESEN, D.D.S., Assistant in Dentistry IGNAZIO F. BOSCARELLI, D.D.S., Instructor in Dentistry

PAUL BRAZEAU, Ph.D., Associate in Pharmacology SEBASTIAN A. BRUNO, D.M.D., Assistant in Dentistry

STANISLAW H. BRZUSTOWICZ, D.D.S., Instructor in Dentistry

BARBARA CARROLL, R.D.H., Instructor in Dental Hygiene

JAMES P. CATTELL, M.D., Research Associate in Psychiatry

BERNARD S. CHAIKIN, D.M.D., Lecturer in Den-

GEORGE B. CROZAT, D.D.S., Lecturer in Dentistry
KOURKEN A. DAGLIAN, D.D.S., Instructor in Dentistry

KENNETH C. DEESEN, D.D.S., Assistant in Dentis-

JOSEPH C. DE LISI, D.D.S., Assistant in Dentistry JOHN J. DOLCE, D.D.S., Instructor in Dentistry ROBERT DRELICH, D.D.S., Assistant in Anatomy JOSEPH D. EBY, D.D.S., Lecturer in Dentistry SOLON A. ELLISON, D.D.S., Associate in Microbiology

BERNARD F. ERLANGER, Ph.D., Associate in Micro-

biology

ROBERT L. FISHER, D.D.S., Assistant in Dentistry EDWARD U. FRIEDMAN, D.D.S., Assistant in Dentistry

HERBERT P. FRITZ, D.D.S., Instructor in Dentistry ROGER G. GERRY, D.M.D., Research Assistant in Dentistry

HERMAN GLADSTONE, M.D., Instructor in Anat-

omy BENJAMIN W. GLICK, M.D., Instructor in Anatomy PAUL GOLDHABER, D.D.S., Research Assistant in Dentistry

HENRY M. GOLDMAN, D.M.D., Lecturer in Dentistry

IDA M. GOLOMB, D.D.S., Instructor in Dentistry AXEL HANSON, Instructor in Dental Technique HAROLD R. HARLAN, D.D.S., M.P.H., Lecturer in Dental Hygiene

STANLEY S. HELLER, D.D.S., Assistant in Dentistry FREDERICK G. HOFMANN, Ph.D., Associate in

Pharmacology

IJOHN D. HOGAN, D.D.S., Instructor in Dentistry
MARGARET HOLDEN, Ph.D., Associate in Micro-

biology
SIDNEY L. HOROWITZ, D.D.S., Research Associate
in Dentistry

ELLEN N. HOSIOSKY, D.M.D., D.D.S., Instructor

in Dentistry

CHRISTIAN A. HOVDE, A.M., Instructor in Anasomy
CALDERON HOWE, M.D., Associate in Microbiology

RUTH K. INNESS, R.D.H., Assistant in Dental Hygiene
JOSEPH E. JOHNSON, D.D.S., Lecturer in Dentistry

SOLOMON L. KATZ, D.D.S., Research Assistant in Dentistry

²BERTRAM KLATSKIN, D.D.S., Instructor in Dentistry

ALICE W. KNOX, Ph.D., Instructor in Microbiology 2ROBERT G. KROLL, D.D.S., Assistant in Dentistry PHILIP KUTNER, D.D.S., Assistant in Dentistry AUSTIN H. KUTSCHER, D.D.S., Research Assistant in Dentistry

HENRY P. LEVY, D.D.S., Assistant in Anatomy EVALD LINDER, Instructor in Dental Technique

JULIUS K. LITTMAN, M.D., Instructor in Anatomy FRANCIS J. LOUGHLIN, D.D.S., Assistant in Dentistry

JOSEPH LUBAN, D.D.S., Research Assistant in Dentistry

EDWARD S. LUBOJA, D.D.S., Instructor in Dentistry MARTIN LUNIN, D.D.S., Instructor in Oral Pa-

thology HARRIET G. McCORMICK, Ph.D., Lecturer in Den-

tal Hygiene EDITH I. MAGUIRE, R.D.H., Lecturer in Dental

Hygiene ²IRWIN D. MANDEL, D.D.S., Instructor in Den-

JOSEPH J. MARTINI, D.D.S., Assistant in Dentistry ARTHUR H. MERRITT, D.D.S., Sc.D., Lecturer in

Deniistry
HENRY MILCH, M.D., Instructor in Anatomy
WILLIAM MILLER, D.D.S., Instructor in Dentistry
SAUL MISHELOFF, D.D.S., Lecturer in Dentistry
HOWARD B. MOSHMAN, D.D.S., Assistant in Dentistry

HENRY I. NAHOUM, D.D.S., Research Assistant in Dentistry

IRVING J. NAIDORF, D.D.S., Assistant in Dentistry

HANS H. NEUMANN, M.D., Research Assistant in

Dentistry

BISSELL B. PALMER, D.D.S., Research Associate in Administrative Medicine

JOHN D. PIRO, D.D.S., Instructor in Dentistry CURT PROSKAUER, D.M.D., Curator of the Museum, Dental and Oral Surgery

JOSEPH RANDI, D.D.S., Assistant in Dentistry ROBIN M. RANKOW, D.D.S., M.D., Instructor in Oral Surgery SYDNEY C. RAPPAPORT, D.D.S., Research Assis-

tant in Dentistry

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ALEXANDER SEELIG, D.D.S., Instructor in Anat-

omy
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GEORGE STEIN, M.D., D.M.D., Research Associate in Dentistry

in Dentistry
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ENNIO L. UCCELLANI, D.D.S., Assistant in Dentistry

D. VINCENT VARALLO, D.D.S., Assistant in Dentistry

LENARD ZUCKERMAN, D.M.D., Assistant in Dentistry

¹ On leave 1954-1955.

² On leave 1954-1955 (military service).

CLINICAL ASSISTANTS

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JEROME BARTWINK, D.M.D.
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HOUGHTON HOLLIDAY CARL R. OMAN JOSEPH SCHROFF
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Robert E. Herlands Louis L. Schwartz Boaz Shattan Adolph Berger, *Consultant*

ALBIN R. SEIDEL, Consultant

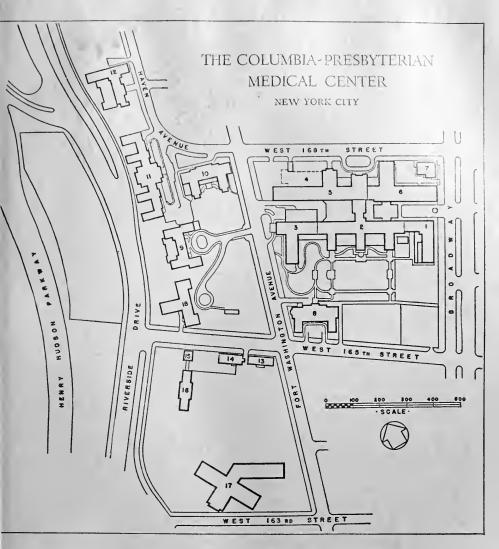
PRESBYTERIAN HOSPITAL ORAL SURGERY SERVICE

MAURICE J. HICKEY, D.M.D., M.D., Assistant Attending Surgeon ROBIN M. RANKOW, D.D.S., M.D., Assistant Attending Surgeon

¹ On leave 1954-1955 (military service).

² On leave 1954-1955.

		. 7



- 1. Babies Hospital
- 2. Presbyterian Hospital Sloane Hospital
 - New York Orthopaedic Hospital
- 3. Harkness Pavilion
- 4. Power plant
- 5. College of Physicians and Surgeons
- 6. Vanderbilt Clinic
 - School of Dental and Oral Surgery
- Washington Heights Health and Teaching Center, New York City Department of Health
 - School of Public Health

- 8. Institute of Ophthalmology
- 9. Maxwell Hall
- 10. Neurological Institute
- 11. New York State Psychiatric Institute and Hospital
- 12. Bard Hall
- 13, 16. Storage
- 14. Shops
- 15. Housing
- 17. Francis Delafield Hospital, New York City Department of Hospitals
- 18. Edward S. Harkness Memorial Hall



COLUMBIA UNIVERSITY BULLETIN OF INFORMATION

Fifty-fifth Series, No. 20

May . 1 1055

STACKS
COLUMBIA UNIVER

MEDICAL LIDAM

ANNOUNCEMENT OF THE

SCHOOL OF DENTAL AND ORAL SURGERY

OF THE

FACULTY OF MEDICINE

1955-1956

COLUMBIA-PRESBYTERIAN MEDICAL CENTER
630 WEST 168TH STREET · NEW YORK 32, N.Y.

Columbia University Bulletin of Information

Fifty-fifth Series, No. 20

May 21, 1955

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The series includes the report of the President to the Trustees and the announcements of the several colleges and schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 5,100—1955

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3–2500.

Announcements

The announcements of each college or school and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this announcement and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

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Assistant to the Registrar Librarian

THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

From its inception, the program of dental education at Columbia University has been fostered by and associated with the University's School of Medicine. The Faculty of Medicine at its stated meetings of November and December, 1915, recommended to the Trustees that a dental school be established in the University on "University Lines."

The President of the University in his annual report of 1916 informed the Trustees that "during the year a group of men have come forward with a well-supported proposal that there be established in connection with the Medical School, a school for the training of dental surgeons." The President also reported that "the project was carefully formulated and presented to the Medical Faculty and received the formal approval of that Faculty and later of the Trustees."

In May, 1916, the University issued a pamphlet entitled A Dental School on University Lines. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In the fall of 1917 James N. Jarvie gave a substantial sum to a fund "to found and maintain the proposed dental school of the University, described in the pamphlet entitled A Dental School on University Lines issued by Columbia University, May 1916."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and from date the School of Dentistry became an integral part of the University. On March 1, 1920, the dental building adjacent to the School of Medicine and Vanderbilt Clinic was finished and assigned to the use of the school.

On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University. By this merger Columbia acquired two large buildings, at 302–306 East 35th Street and 309–315 East 34th Street, in which the school was housed up to the time of moving into the Medical Center.

The merging of the schools did not alter the University's policy for dental education. In the 1923–1924 announcement of the School of Dental and Oral Surgery this policy was reaffirmed by the statement, "It is the purpose of the School of Dental and Oral Surgery to combine in the highest degree practicable a sound knowledge of the fundamentals of medicine with adequate training in the technical procedures of dental science and arts."

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the school occupies three

floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the school, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School of Dental and Oral

Surgery.

ADMISSION TO THE FIRST YEAR

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York

State Board of Regents:

	Semester Hour.
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge

of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within one week after notification of acceptance

(see page 7).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Columbia College. Upon receiving ninety-four points credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above. This combined course with Columbia College is being discontinued for students entering Columbia College in September, 1954, and thereafter.

Combined courses with Barnard College. Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard

College.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one Summer Session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar and file a registration blank giving such information as may be required. The periods set aside for registration in each session are stated in the Academic Calendar at the beginning of this announcement. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University Statutes provide that tuition fees and the University fee are payable semiannually in advance. No reduction is made for late registration. Registration will not be complete until such fees are paid. Checks should be drawn to the order of Columbia University and presented in person or mailed to the Office of the Bursar. Payments of fees after the last day of registration (see the Academic Calendar) imposes automatically the statutory charge of \$3.00 for the privilege. Under the regulations, the privileges of the University are not available to any student until he has completed his registration.

The fees to be paid by students are subject to change at any time at the discretion of the Trustees.

The following annual fees are prescribed for dental students:

a)	Unive	ersity	tee

I. For each Winter or Spring Session or any part thereof, for students enrolled for:

One to four points, inclusive \$ 5.00

More than four points to nine points, inclusive 10.00

More than nine points 20.00

2. For registration as engaged in research only, for any period not longer than a Winter or a Spring Session

b) Tuition fee

For the course in dentistry for one academic year (or equivalent) in the case of a student enrolled for the full course, payable in two installments For students not enrolled for the full course, fees are to be assessed by the Registrar as provided by the University Statutes.

c) Fee for application for a degree 20.00

c) Fee for application for a degree

d) Privileges

 Late registration or late application for a degree or for deficiency or special examinations

Deficiency or special examinations
 Renewal of application for any degree

3.00

3.00

20.00

825.00

e) Student health service fee

This fee will be used to pay the annual premiums of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the student health service.

For all students, per academic year

\$ 25.00

f) Case rental

For Sophomores, Juniors, and Seniors, rental for one instrument case, for one academic year, payable in two installments

5.00

g) Rebates

- The University fee, the student health service fee, and the fee for application for any degree shall not be subject to rebate.
- 2. No tuition fee shall be returned for any course which the student may for any reason discontinue. Exception to this rule may be made only in cases of total withdrawal from the University, when a partial return of fees may be authorized by the Registrar.
- When a rebate is allowed for the discontinuance of courses or withdrawal from the University, such rebate will be reckoned from the day upon which the Registrar receives notice from the student.

h) Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fee for processing of application. A fee of \$5.00 is charged to every student who applies for admission to the School of Dental and Oral Surgery or the School of Medicine. This fee covers the cost of processing the application.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon rates which prevailed during 1954–1955 and can be accepted as applicable in general for the year 1955–1956 unless national economic changes require their alteration.

	Average	Minimum
Tuition and University fees	\$ 865	\$ 865
Miscellaneous fees	35	35
Room	330	225
Board	600	500
Books	150	115
Instruments (see below)	400	400
Laundry	75	35
	\$2,455	\$2,175

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The greatest part of the total instrument cost is incurred in the sophomore year. The cost of books will vary, depending upon the choice made from the selection offered.

STUDENTS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is registered.

Students prevented by conscientious scruples from complying with academic requirements which may be fulfilled only upon days set apart by their church for religious observance should make application to the Dean for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper, and, subject to the reserved power of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing and not subject to discipline who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean. Students withdrawing must notify the Registrar immediately.

The Dean of the school may, for reasons of weight, grant a leave of absence to a student in good standing.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curricutum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

- 1. Recommended for advancement.
- 2. Recommended for readmission to the same class.
- 3. Recommended neither for advancement nor for readmission to the same class:
 - (a) Because of failure.
 - (b) Because they fall under paragraph b of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GRADUATION

Commencement occurs in June, at which time all recipients of degrees awarded during the academic year are expected to attend the exercises. Diplomas are issued in June or at various times during the year.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of \$1.00 each time that a candidate chooses to come up for consideration, within a period not to exceed three years. Thereafter, with the filing of a second application the regular fee of \$20 is again payable.

Dates for the filing of applications are given in the Academic Calendar at the beginning of this announcement.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

SHORT COURSES FOR GRADUATES IN DENTISTRY

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1955–1956 short refresher courses will be offered in various subjects.

Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses. For further information see the announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

CERTIFICATE OF TRAINING

The School of Dental and Oral Surgery is authorized to grant certificates of training in special branches of dentistry. The course of study for the certificate of training includes

special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology. For further information see the announcement of Postgraduate Courses for Dentists, which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University; anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health, 600 West 168th Street, New York 32, N.Y.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small

sections, conferences, and the comprehensive case method of instruction.

CURRICULUM

1955-1956

Subjects*	Lecture or Seminar Hours	Lab. or Clinic Hours	Total Hours
FIRST YEAR			
Anatomy Embryology 152 F Gross 151 FS Microscopic 150 FS Neuro 153 T Oral 101 ST	18 50 42 30 19	222 126 36 82	18 272 168 66 101
Biochemistry 150 ST Histology, Oral 115 ST Physiology 150 FS Theory and Practice Dental History 287 T	38 25 56	117 52 152	155 77 208
Total			1.075

^{*} Letter following course number designates trimester: F= first, S = second, and T = third.

	Lccture or	Lab. or	
Subjects*	Seminar Hours	Clinic Hours	Total Hours
SECOND YEAR	1104/3	110473	Hours
Crown and Bridge 105 ST	20	184	20.1
Dental Materials 126 FS	10	56	204 66
Microbiology 151 F and 152 F	43	99	142
Operative Dentistry 131 FST	20	187	207
Pathology 150 FS	54	141	195
Periodontology 151 T	10	44	54
Pharmacology 150 ST	55	33	88
Prosthetic Dentistry 157 FST	20	198	218
Psychiatry 150 S	II		11
Surgery, Principles 168 ST	10		10
Surgery, Oral 270A ST	10		10
Theory and Practice			
Therapeutics 286 T	10		10
Total			1,215
			-,,
THIRD YEAR			
Anatomy, Maxillofacial 252 S Crown and Bridge	10		10
Technique 205 F		96	96
Clinic 206 ST	10	114	124
Applied Occlusal Dynamics 212 T		30	30
Diagnosis 212 FST	30	25	55
Operative Dentistry 233 FST	10	276	286
Orthodontics 241 F	20	60	80
Pathology, Oral 246 FS	20	60	80
Periodontology 251 S		30	30
Practice of Medicine 278 ST	40	22	62
Prosthetic Dentistry 260 FST and 261 FST	20	177	197
Radiology 267 F	10	15	25
Surgery, Oral 270B F	10	20	30
Total			1,105
FOURTH YEAR			
Crown and Bridge 210 FST and 211 FST	10	165	175
Diagnosis 213 F		25	25
Diagnosis Seminar 214 S		30	30
Diagnosis 215 T (continuation of 214)	10		10
Orthodontics 242 FST		30	30
Operative Dentistry 234 FST	20	305	325
Pedodontics 202 FST	10	87	97
Periodontology 252 FS and 253 FS	20	30	50
Prosthetic Dentistry 263 FST and 264 FST	10	165	175
Public Health 222 S	20		20
Surgery, Oral 272 FST	40	60	100
Surgery Seminar 274 T	10		10
Surgical Prosthesis 265 T Theory and Practice		30	30
Clinical Oral Physiology 283 F	10		10
Ethics, Jurisprudence and Practice Ad-			
ministration 281 FST	30		30
Comprehensive 285 T			
Total			1,117

^{*} Letter following course number designates trimester: F = first, S = second, and T = third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 12 and 13 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150-Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252-Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150-Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism,

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of Diagnosis 212.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of Diagnosis 214.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year. Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with *Microbiology 105F* in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 131—Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of *Operative Dentistry 233* with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151—Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252-Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150—Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY

Physiology 150—Mammalian physiology. Freshman year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 105—Crown and bridge lectures and technique. Sophomore year.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 150—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222—Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

RADIOLOGY

Radiology 267—Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstration, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

Anatomy: Gross Anatomy: One of the following three: Gray's Anatomy; Cunningham, Textbook of Anatomy; or Morris, Human Anatomy. One of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, Manual of Practical Anatomy, Vols. II and III. One of the following four: Grant, Atlas of Anatomy; Truex and Kellner, Detailed Atlas of the Head and Neck; Spalteholz, Hand Atlas of Human Anatomy; or Anson, Atlas of Human Anatomy.

MAXILLOFACIAL ANATOMY: Shapiro, Applied Anatomy of the Head and Neck (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, Developmental Anatomy; Hamilton, Human Embryology; or Patten, Human Embryology.

MICROSCOPIC ANATOMY: Bailey, Textbook of Histology (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, Human Neuroanatomy; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, Oral Histology and Embryology; Diamond, Dental Anatomy.

BIOCHEMISTRY: Harrow and Mazur, Textbook of Biochemistry (6th ed.); Karshan, Laboratory Manual of Biochemistry for Dental Students.

Dental Ethics, Jurisprudence, and Practice Administration: Regan, The Doctor, the Patient and the Law.

Dental Therapeutics: Council on Therapeutics, American Dental Association, Accepted Dental Remedies; McGehee and Green, Pharmacology and Pharmacotherapeutics for Dentists. (Reference: Goodman and Gilman, Pharmacological Basis of Therapeutics, 1955.)

DIAGNOSIS: Thoma, Oral Pathology (4th ed.); Burket, Oral Medicine (2d ed.).

MEDICINE: One of the following three: Harrison, Principles of Internal Medicine (2d ed.); Comroe, Collins, and Crane, Internal Medicine in Dental Practice (4th ed.); or Cecil and Loeb, Textbook of Medicine (9th ed.).

Microbiology: Laboratory Manual in Microbiology and Immunology; Smith and Conant, Zinsser's Textbook of Bacteriology (10th ed.).

OPERATIVE DENTISTRY: Black, Operative Dentistry, Vols. II and III; Operative Dentistry Syllabus; Grossman, Root Canal Therapy.

Oral Pathology: Thoma, Oral Pathology (3d ed.); or Kronfeld, Histopathology of the Teeth (3d ed.).

ORTHODONTICS: Salzmann, Principles of Orthodontics.

Pathology: One of the following four: Boyd, Textbook of Pathology; Karsner, Textbook of Pathology; Moore, Textbook of Pathology; or Anderson, Pathology.

Pedodontics: McBride, Juvenile Dentistry (5th ed.).

Periodontology: Beube, Periodontology; and Goldman, Periodontia.

PHARMACOLOGY: Goodman and Gilman, Pharmacological Basis of Therapeutics (1955).

Physiology: Bard, Macleods Physiology in Modern Medicine (10th ed.).

Prosthetic Dentistry: Skinner, Science of Dental Materials; Schlosser and Gehl, Complete Denture Prosthesis; Swenson, Complete Dentures; Tylman, Crown and Bridge Prosthesis; United States Government Printing Office, Physical Properties of Dental Materials; Young et al., Syllabus on Complete Dentures.

PSYCHIATRY: Strecker, Fundamentals of Psychiatry (5th ed.); Noyes, Modern Clinical Psychiatry (4th ed., 1953); English and Pearson, Emotional Problems of Living (1945).

RADIOLOGY: McCall and Wald, Clinical Dental Roentgenology (3d ed).

Surgery: Berger, Principles and Technique of Oral Surgery; Berger, Principles and Technique of the Removal of Teeth; Parker, Synopsis of Traumatic Injuries of the Face and Jaw.

SURGICAL PROSTHESIS: Beder, Surgical and Maxillofacial Prosthesis.

GENERAL INFORMATION

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LIBRARY FACILITIES

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-three hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge for physical education, amounting to one dollar (\$1.00) per session (Winter, Spring, or Summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. In addition a deposit must be made of two dollars (\$2.00) for a lock, locker, and towel.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2d Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 p.m. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence halls announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University residence hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

See also "Graduate Courses in the Basic Sciences" on page 11.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a Senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the Faculty, is most

proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the Senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the Faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

Student Loans

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the Winter Session should be filed by September 15; for the Spring Session, by January 15.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

OFFICERS OF INSTRUCTION

HAROLD A. ABRAMSON, Assistant Clinical Professor of Physiology; A.B., Columbia, 1920; M.D., 1923

THOMAS H. ALLEN, Associate Professor of Physiology; A.B., Iowa, 1936; Ph.D., 1941

FRANZ ALTMANN, Associate Clinical Professor of Otolaryngology; M.D., Vienna, 1925

VIRGINIA APGAR, Professor of Anesthesiology; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933

EDMUND APPLEBAUM, Associate Professor of Dental Anatomy; D.D.S., New York College of Dentistry, 1922

HOWARD ARDEN, Assistant Professor of Dentistry; B.S., Fordham, 1943; D.D.S., Columbia, 1946

HERBERT D. AYERS, JR., Assistant Clinical Professor of Dentistry; A.B., Columbia, 1929; D.D.S., 1931 MARGARET W. BARNARD, Associate Professor of

Public Health Practice; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

HENRY A. BARTELS, Assistant Professor of Oral Pathology, B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927

HERBERT BARTELSTONE, Assistant Professor of Pharmacology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945 FRANK E. BEUBE, Clinical Professor of Dentistry;

L.D.S., D.D.S., Toronto, 1930

HAROLD W. BROWN, Professor of Parasitology; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936

JACK BUDOWSKY, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1943

THEODORE BUNDRANT, Associate Clinical Profes-

sor of Dentistry; D.D.S., Howard, 1929 LESTER R. CAHN, Associate Professor of Oral Pathology; D.D.S., New York College of Dentistry, 1918 EDWARD A. CAIN, JR., Associate Professor of

Dentistry; B.S., Fordham, 1942; D.D.S., Columbia, 1945 NEAL W. CHILTON, Assistant Professor of Dental Public Health Practice; B.S., College of the City of New York, 1939; D.D.S., New York University,

1943; M.P.H., Columbia, 1946 LOUIS J. CIZEK, Assistant Professor of Physiology;

B.S., Fordham, 1937; M.D., Columbia, 1941 E. GURNEY CLARK, Professor of Epidemiology; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944

HANS T. CLARKE, Professor of Biochemistry; B.Sc.,

London, 1908; D.Sc., 1914

LOUIS A. COHN, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928

ROBERT W. COON, Associate Professor of Pathology; B.S., North Dakota, 1942; M.D., Rochester, 1944

WILFRED M. COPENHAVER, Professor of Anatomy; A.B., Western Maryland, 1921; Ph.D., Yale, 1925

JOSEPH A. CUTTITIA, Assistant Professor of Dentistry; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939

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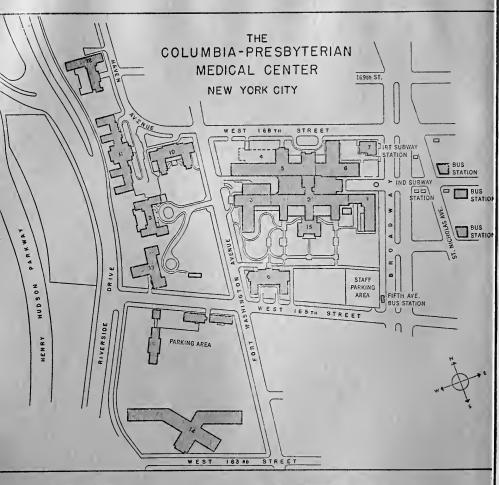
1955

September	6	Tuesday, and September 7, Wednesday. Registration, include a pagment of fees.
September	12	Monday. Classes begin.
November	8	Tuesday. Election Day. Holiday.
November	24	Thursday. Thanksgiving Day. Holiday.
November	26	Saturday. End of first trimester.
November	28	Monday. Beginning of second trimester.
December	19	Menday, through
		1956
January	2	Monday. Christmas Holidays.
February	22	Wednesday. Washington's Birthday. Holiday.
February	25	Saturday. End of second trimester.
February	27	Monday. Beginning of third trimester.
March	1	Thursday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.
March	25	Sunday, through April 1, Sunday. Easter Holidays.
May	19	Saturday. Last day of classes.
May	21	Monday, through May 31, Thursday. Final examinations.
May	30	Wednesday. Memorial Day. Holiday.

June

5

Tuesday. Conferring of degrees.



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Bulletin of Information | SERIES FIFTY-SIX NUMBER TWENTY-TWO - JUNE 2, 1956

ANNOUNCEMENT OF THE

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1956-1957



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Columbia University Bulletin of Information

Fifty-sixth Series, No. 22

June 2, 1956

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The series includes the report of the President to the Trustees and the announcements of the several colleges and schools relating to the work of the next year. These are made as accurate as possible, but the right is reserved to make changes in detail as circumstances require. The current number of any of these announcements will be sent upon written application to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y. Copies may be obtained in person from the Office of the Secretary, 213 Low Memorial Library.

C. U. P. 5,200-1956

Communications

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3–2500.

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Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but In 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

In May, 1916, the University issued a pamphlet entitled A Dental School on University Lines. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and the School of Dentistry became an integral part of the University. On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1905) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University.

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the school, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral parts of the College of Physicians and Surgeons and the School.

ADMISSION, REGISTRATION, AND FEES

ADMISSION TO THE FIRST YEAR

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York State Board of Regents:

	Semester Hour
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within two weeks after notification of acceptance

(see page 6).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Columbia College. Upon receiving ninety-four points of credit, sixty-four of which must be for work in Columbia College, including all the work prescribed for the degree of Bachelor of Arts in Columbia College, a student may take studies in the first year of the School of Dental and Oral Surgery, provided he can satisfy the stated requirements and is accepted for admission therein, and will receive the degree of Bachelor of Arts from Columbia College upon the satisfactory completion of the year's work. No course may be counted toward a professional degree and at the same time be included among those which go to make up the ninety-four points referred to above. This combined course with Columbia College is being discontinued for students entering Columbia College in September, 1954, and thereafter.

Combined courses with Barnard College. Students from Barnard College may exercise the professional option after the completion of ninety points of academic work, including all grouped work and a major of twenty-eight points unless this number is reduced in individual cases by special permission of the Committee on Instruction of Barnard

College.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar, file a registration blank giving such information as may be required and pay his fees. The periods set aside for registration in each session are stated in the Academic Calendar. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

The University statutes provide that tuition fees and the University fee are payable semiannually in advance. As stated above, payment of fees is the last step in the registration procedure; checks should be drawn to the order of Columbia University.

No reduction is made for late registration. If fees are paid after the last day of registration (see the Academic Calendar), a statutory charge of \$3.00 is automatically imposed.

The following annual fees for the full program for a candidate for the D.D.S. degree are prescribed by statute and are subject to change at any time at the discretion of the Trustees. The fees to be paid by students who are not enrolled for the full program will be assessed by the Registrar as provided by the University statutes.

University fee	\$ 48.00
Tuition fee	900.00
Student health service fee This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance (unless the student is already covered by hospital insurance) and to pay part of the cost of the student health	
service	25.00
Instrument case rental (for sophomores, juniors, and seniors)	5.00
Application fees	
For processing application for admission	5.00
For each deficiency or special examination	10.00
For renewal of application for a degree*	1.00
Late fees	
For late registration	3.00
For late application for a deficiency or special examination	5.00
For late application, or renewal of application, for a degree	5.00

Rebates

The University fee, the student health service fee, application fees, and late fees are not subject to rebate. If a student withdraws from the University, a partial return of tuition fees may be authorized by the Registrar. When a rebate is allowed, it will be reckoned from the day on which the Registrar receives written notice from the student.

Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or

^{*} An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing; but under conditions prescribed by the respective faculties it may be subject to renewal for a fee of \$1.00 each time that a candidate chooses to come up for consideration.

incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon rates which prevailed during 1955–1956 and can be accepted as applicable in general for the year 1956–1957 unless national economic changes require their alteration.

	Average	Minimum
Tuition fee	\$ 900	\$ 900
Miscellaneous fees	78	78
Room	330	225
Board	600	500
Books	150	115
Instruments (see below)	400	400
Laundry	75	35
	\$2,533	\$2,253

These estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The greatest part of the total instrument cost is incurred in the sophomore year. The cost of books will vary, depending upon the choice made from the selection offered.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small

sections, conferences, and the comprehensive case method of instruction.

Subjects*	Class Hours	Lab. or Clin. Hours	Total Hours
FIRST YEAR			
Anatomy			
Embryology 152 F	18		18
Gross 151 FS	50	222	272
Microscopic 150 FS	42	126	168
Neuro 153 T	30	36	66
Oral 101 ST	19	82	101
Biochemistry 150 ST	38	117	155
Histology, Oral 115 ST	25	52	77
Physiology 150 FS	56	152	208
Theory and Practice			
Dental History 287 T	10		10
Total			1,075
SECOND YEAR			
Crown and Bridge 105 ST	20	184	204
Dental Materials 126 FS	10	56	66
Microbiology 151 F and 152 F	43	99	142
Operative Dentistry 131 FST	20	187	207
Pathology 150 FS	54	141	195
Periodontology 151 T	10	44	54
Pharmacology 150 ST	55	33	88
Prosthetic Dentistry 157 FST	20	198	218
Psychiatry 150 S	11		11
Surgery, Principles 168 ST	10		10
Surgery, Oral 270A ST	10		10
Theory and Practice			
Therapeutics 286 T	10		10
Total			1,215
1 0/100			1,213

^{*} Letter following course number designates trimester: F = first, S = second, and T = third.

Subjects*	Class Hours	Lab. or Clin. Hours	Total Hours
THIRD YEAR	11011/3	Cim. Hours	11011/3
Anatomy, Maxillofacial 252 S	10		10
Crown and Bridge		. (- (
Technique 205 F		96	96
Clinic 206 ST	10	114	124
Applied Occlusal Dynamics 212 T		30	30
Diagnosis 212 FST	30	25	55 286
Operative Dentistry 233 FST	10	276 60	80
Orthodontics 241 F	20	60	8o
Pathology, Oral 246 FS	20		
Periodontology 251 S		30	30 62
Practice of Medicine 278 ST	40	22	
Prosthetic Dentistry 260 FST and 261 FST	20	177	197
Radiology 267 F	10	15	25
Surgery, Oral 270B F	10	20	30
Total			1,105
FOURTH YEAR			
Crown and Bridge 210 FST and 211 FST	10	165	175
Diagnosis 213 F		25	25
Diagnosis Seminar 214 S		30	30
Diagnosis 215 T (continuation of 214)	10		10
Orthodontics 242 FST		30	30
Operative Dentistry 234 FST	20	305	325
Pedodontics 202 FST	10	87	97
Periodontology 252 FS and 253 FS	20	30	50
Prosthetic Dentistry 263 FST and 264 FST	10	165	175
Public Health 222 S	20		20
Surgery, Oral 272 FST	40	60	100
Surgery Seminar 274 T	10		10
Surgical Prosthesis 265 T		30	30
Theory and Practice			
Clinical Oral Physiology 283 F	10		10
Ethics, Jurisprudence and Practice Ad-			
ministration 281 FST	30		30
Comprehensive 285 T			
Total			1,117

^{*} Letter following course number designates trimester: $F \equiv$ first, $S \equiv$ second, and $T \equiv$ third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 8 and 9 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101-Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral histology and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150—Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153—Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to Anatomy 106S in the Medical School.

Anatomy 252—Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126-Physical properties of dental materials. Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of Diagnosis 212.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar. Senior year.

Continuation of Diagnosis 214.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering phases of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year. Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with Microbiology 105F in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 131—Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

Orthodontics 242-Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246-Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

12 · COURSES OF INSTRUCTION

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151-Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150—Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied.

PHYSIOLOGY

Physiology 150—Mammalian physiology. Freshman year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 105-Crown and bridge lectures and technique. Sophomore year.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157—Prosthetic lectures and technique. Sophomore year.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212—Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261-Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265—Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 10—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222—Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

RADIOLOGY

Radiology 267—Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstration, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Sophomore year.

Lectures and conferences on drugs and other therapeutic agents used in dentistry.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

Anatomy: Gross Anatomy: One of the following three: Gray's Anatomy; Cunningham, Textbook of Anatomy; or Morris, Human Anatomy. One of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, Manual of Practical Anatomy, Vols. II and III. One of the following four: Grant, Atlas of Anatomy; Truex and Kellner, Detailed Atlas of the Head and Neck; Spalteholz, Hand Atlas of Human Anatomy; or Anson, Atlas of Human Anatomy.

MAXILLOFACIAL ANATOMY: Shapiro, Applied Anatomy of the Head and Neck (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, Developmental Anatomy; Hamilton, Human Embryology; or Patten, Human Embryology.

MICROSCOPIC ANATOMY: Bailey, Textbook of Histology (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, Human Neuroanatomy; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, Oral Histology and Embryology; Diamond, Dental Anatomy.

- BIOCHEMISTRY: Harrow and Mazur, Textbook of Biochemistry (6th ed.); Karshan, Laboratory Manual of Biochemistry for Dental Students.
- Dental Ethics, Jurisprudence, and Practice Administration: Mann and Easlick, Practice Administration for the Dentist; Carnahan, The Dentist and the Law.
- Dental Therapeutics: Council on Therapeutics, American Dental Association, Accepted Dental Remedies; McGehee and Green, Pharmacology and Pharmacotherapeutics for Dentists. (Reference: Goodman and Gilman, Pharmacological Basis of Therapeutics, 1955.)
- Diagnosis: Thoma, Oral Pathology (4th ed.); Burket, Oral Medicine (2d ed.).
- MEDICINE: One of the following three: Cecil and Loeb, Textbook of Medicine (9th ed.); Harrison, Principles of Internal Medicine (2d ed.); or Comroe, Collins, and Crane, Internal Medicine in Dental Practice (4th ed.).
- MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Burrows, Textbook of Microbiology (16th ed.).
- OPERATIVE DENTISTRY: Black, Operative Dentistry, Vols. I and II (9th ed.); Operative Dentistry Syllabus; Grossman, Root Canal Therapy.
- Oral Pathology: Thoma, Oral Pathology (3d ed.); or Kronfeld, Histopathology of the Teeth (4th ed.).

16 · TEXTBOOKS

ORTHODONTICS: Salzmann, Principles of Orthodontics.

PATHOLOGY: One of the following four: Boyd, Textbook of Pathology; Karsner, Textbook of Pathology; Moore, Textbook of Pathology; or Anderson, Pathology.

Peddonntics: McBride, Juvenile Dentistry (5th ed.); Brauer et al., Dentistry for Children (3d ed.).

Periodontology: Beube, Periodontology; and Goldman, Periodontia.

PHARMACOLOGY: Goodman and Gilman, Pharmacological Basis of Therapeutics (1955).

Physiology: Bard, Medical Physiology (10th ed.).

Prosthetic Dentistry: Skinner, Science of Dental Materials; Schlosser and Gehl, Complete Denture Prosthesis; Swenson, Complete Dentures; Tylman, Crown and Bridge Prosthesis; United States Government Printing Office, Physical Properties of Dental Materials; Young et al., Syllabus on Complete Dentures.

PSYCHIATRY: English and Finch, Introduction to Psychiatry; Noyes, Modern Clinical Psychiatry (4th ed., 1953); Strecker, Fundamentals of Psychiatry (5th ed.).

Radiology: McCall and Wald, Clinical Dental Roentgenology (3d ed.).

Surgery: Berger, Principles and Technique of the Removal of Teeth.

SURGICAL PROSTHESIS: Beder, Surgical and Maxillofacial Prosthesis.

POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1956–1957 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School of Dental and Oral Surgery is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the announcement of Postgraduate Courses for Dentists,

which may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University; anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the announcement of the Faculty of Pure Science, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

GENERAL REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is a part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered, nor may any student register after the stated period unless he obtains the written consent of the

proper dean or director.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to the proper dean or director for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper and, subject to the reserved powers of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean or director. Students withdrawing are required to notify the Registrar in writing at once.

The dean or director may, for reasons of weight, grant a leave of absence to a student in good standing.

GRADUATION

All recipients of degrees awarded during the academic year are expected to attend the Commencement exercises in June unless excused. Diplomas are issued at the times stated in the Academic Calendar; those for the degree of Doctor of Philosophy, however, are issued at any time during the year upon completion of requirements by the candidate.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the school.

Students are classified for readmission or promotion under the following headings:

- 1. Recommended for advancement.
- 2. Recommended for readmission to the same class.
- 3. Recommended neither for advancement nor for readmission to the same class:
 - (a) Because of failure.
 - (b) Because they fall under paragraph b of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GENERAL INFORMATION

LIBRARY FACILITIES

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-three hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

See also "Graduate Courses in the Basic Sciences" on page 17.

Student Loans

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the winter session should be filed by September 15, for the spring session, by January 15.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

COURSES FOR DENTAL HYGIENISTS

In September, 1947, the period of training for dental hygienists was increased from one to two academic years. On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points (including satisfactory courses in English, biological science or chemistry, and sociology or psychology), complete the course of instruction in the field of dental hygiene, consisting of two academic years of study, prescribed by the Faculty of Medicine.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For further information address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge of \$3.00 per session (winter, spring, or summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. The student receives locker privileges, a towel, complete uniform (except shoes), and laundry service.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 220, 2d Floor, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 p.m. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medcal Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with

him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

UNIVERSITY RESIDENCE HALLS

Residence halls announcements and application blanks for rooms may be obtained (for men) from the Men's Residence Hall's Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. The advance reservation deposit is payable upon receipt of room assignment. Checks must be made payable to Columbia University.

KING'S CROWN HOTEL

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

INTERNATIONAL HOUSE

International House, while not a University residence hall, is primarily a residence for students at Columbia University and other colleges and universities in New York City. It offers comfortable accommodations at reasonable rates. For further information, write to International House, 500 Riverside Drive, New York 27, N.Y.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

OFFICERS OF INSTRUCTION

HAROLD A. ABRAMSON, Assistant Clinical Professor of Physiology; A.B., Columbia, 1920; M.D., 1923

THOMAS H. ALLEN, Associate Professor of Physiology; A.B., Iowa, 1936; Ph.D., 1941

FRANZ ALTMANN, Associate Clinical Professor of Otolaryngology; M.D., Vienna, 1925

VIRGINIA APGAR, Professor of Anesthesiology; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933

EDMUND APPLEBAUM, Associate Professor of Dental Anatomy; D.D.S., New York College of Dentistry, 1922

HOWARD ARDEN, Assistant Professor of Dentistry; B.S., Fordham, 1943; D.D.S., Columbia, 1946

HERBERT D. AYERS, Jr., Associate Clinical Professor of Dentistry; A.B., Columbia, 1929; D.D.S., 1931

MARGARET W. BARNARD, Asssociate Professor of Public Health Practice; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

HENRY A. BARTELS, Assistant Professor of Oral Pathology; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927

HERBERT BARTELSTONE, Assistant Professor of Pharmacology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

JAMES W. BENFIELD, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1945

FRANK E. BEUBE, Clinical Professor of Dentistry; L.D.S., D.D.S., Toronto, 1930

HAROLD W. BROWN, Professor of Parasitology; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936

STANISLAW H. BRZUSTOWICZ, Assistant Clinical Professor of Dentistry; B.S., St. John's, 1940; D.D.S., Columbia, 1943

JACK BUDOWSKY, Associate Clinical Professor of Dentistry; D.D.S., Columbia 1943

THEODORE BUNDRANT, Associate Clinical Professor of Dentistry; D.D.S., Howard, 1929

LESTER R. CAHN, Associate Professor of Oral Pathology; D.D.S., New York College of Dentistry, 1918 EDWARD A. CAIN, JR., Associate Professor of Dentistry; B.S., Fordham, 1942; D.D.S., Columbia

1945 NEAL W. CHILTON, Assistant Professor of Dental Public Health Practice; B.S., College of the City of New York, 1939; D.D.S., New York University,

1943; M.P.H., Columbia, 1946 LOUIS J. CIZEK, Associate Professor of Physiology; B.S., Fordham, 1937; M.D., Columbia, 1941

GURNEY CLARK, Professor of Epidemiology; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944

LOUIS A. COHN, Associate Professor of Dentistry; D.D.S., Pennsylvania, 1928

WILFRED M. COPENHAVER, Professor of Anatomy; A.B., Western Maryland, 1921; Ph.D., Yale, 1925

JOSEPH A. CUTTITA, Associate Professor of Dentistry; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939

KOURKEN A. DAGLIAN, Assistant Clinical Professor of Dentistry; B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943

SAMUEL R. DETWILER, Professor of Anatomy; Ph.B., Yale, 1914; A.M., 1916; Ph.D., 1918; M.S. (hon.), 1931

NICHOLAS DISALVO, Assistant Professor of Physiology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952

EARL T. ENGLE, Professor of Anatomy; A.B., Nebraska Wesleyan, 1920; A.M., Colorado, 1924; Ph.D., Stanford, 1925

BERNARD F. ERLANGER, Assistant Professor of Microbiology; A.B., College of the City of New York, 1943; A.M., New York University, 1949; Ph.D., Columbia, 1951

JOHN W. FERTIG, Professor of Biostatistics; A.B., Ursinus, 1931; Ph.D., Minnesota, 1935

JOSEPH E. FIASCONARO, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1943

MORRIS FIERSTEIN, Associate Clinical Professor of Dentistry; D.D.S., Columbia, 1921

LEWIS FOX, Associate Clinical Professor of Dentistry; D.D.S., Maryland, 1927

HERBERT P. FRITZ, Assistant Clinical Professor of Dentistry; B.S., New York University, 1933; D.D.S., Columbia, 1936 HARRY A. GALTON, Associate Clinical Professor of

Dentistry; D.D.S., Columbia, 1932

LEONARD J. GOLDWATER, Professor of Occupational Medicine; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D. 1937; M.S.P.H., Columbia, 1941

ROBERT GOTTSEGEN, Assistant Clinical Professor of Dentistry; A.B., Michigan, 1939; D.D.S., Co-

lumbia, 1943 MAGNUS I. GREGERSEN, Dalton Professor of Physiology; A.B., Stanford, 1923; A.M., 1924; Ph.D.,

Harvard, 1930 ROBERT E. HERLANDS, Associate Professor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944

MAURICE J. HICKEY, Associate Dean (Dental and Oral Surgery); Professor of Oral Surgery; D.M.D., Harvard, 1932; M.D., Columbia, 1937

GEORGE W. HINDELS, Assistant Clinical Professor of Dentistry; M.D., Vienna, 1938; D.D.S., Colum-

hia 1943 LEONARD HIRSCHFELD, Associate Clinical Pro-

fessor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944 FRANKLIN HOLLANDER, Assistant Clinical Profes-

sor of Physiology; B.S., Columbia, 1919; Ph.D., 1923 ELLEN N. HOSIOSKY, Assistant Clinical Professor of Dentistry; D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947

CALDERON HOWE, Assistant Professor of Microbiology; A.B., Yale, 1938; M.D., Harvard, 1942 IRVIN L. HUNT, JR., Associate Professor of Dentis-

try; D.D.S., Pennsylvania, 1929

ALVIN R. JACOBSON, Associate Professor of Sanitary Science; B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941

JAMES JAY, Assistant Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1940

DOROTHY D. JOHNSON, Assistant Professor of Anatomy; A.B., Bates, 1941; A.M., Vassar, 1943;

Ph.D., Columbia, 1949
ELVIN A. KABAT, Professor of Microbiology; B.S.,
College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937

MAXWELL KARSHAN, Associate Professor of Biochemistry; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925 MORRIS KAVELLE, Assistant Clinical Professor of Dentistry; A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

Dentistry; D.D.S., Columbia, 1933

BERTRAM KLATSKIN, Assistant Clinical Professor of Dentistry; A.B., Cornell, 1937; D.D.S., Columbia,

LAWRENCE C. KOLB, Professor of Psychiatry; M.D., Johns Hopkins, 1934

JOSEPH M. LEAVITT, Assistant Clinical Professor of

Dentistry; D.D.S., Columbia, 1940 JESSE L. LEFCOURT, Assistant Clinical Professor;

B.S., Columbia, 1929; D.D.S., Columbia, 1931 BARNET M. LEVY, Professor of Dentistry; A.B., Pennsylvania, 1938; D.D.S., 1942; M.S., Vitginia, 1944

GEORGE F. LINDIG. Associate Clinical Professor of

Dentistry; D.D.S., Minnesota, 1924

JOHN J. LUCCA, Assistant Professor of Dentistry; A.B., New York University, 1941; D.D.S., Columbia, 1947

WILLIAM MILLER, Assistant Clinical Professor of Dentistry; B.S., Columbia, 1927; D.D.S., 1931 WILLIAM J. MILLER, Assistant Clinical Professor of

Dentistry; A.B., New York University, 1940; D.D.S., Columbia, 1943

MELVIN MORRIS, Assistant Clinical Professor of Dentistry; B.S., College of the City of New York, 1934; A.M., Columbia, 1937; D.D.S., 1941

WILLIAM L. NASTUK, Associate Professor of Physi-

ology; B.S., Rutgers, 1939; Ph.D., 1945 ALVIN S. NATHAN, Associate Clinical Professor of

Dentistry; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938 JOHN L. NICKERSON, Professor of Physiology; B.A.,

Dalhousie, 1925; M.A., 1928; Ph.D., Princeton, 1935

CARL R. OMAN, Professor of Dentistry; D.D.S., Minnesota, 1914

ARMAND OPPENHEIMER, Assistant Clinical Professor of Dentistry; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929

MAX A. PLEASURE, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928; M.S.P.H.,

Columbia, 1941

ROBIN M. RANKOW, Assistant Clinical Professor of Oral Surgery; D.D.S., Columbia, 1940; M.D.,

Rochester, 1950

WILLARD C. RAPPLEYE, Dean, Faculty of Medicine; Vice President in Charge of Medical Affairs; Professor of Medical Economics, A.B., Illinois, 1915; M.D., Harvard, 1918; A.M., Yale, 1922; Sc.D., Trinity (hon.), 1939; Rutgers (hon.), 1949; Med.Sc.D., Women's Medical College of Pennsylvania (hon.), 1950

WILLIAM M. ROGERS, Assistant Professor of Anatomy; B.S., Georgia, 1921; Ph.D., Cornell, 1927 WALTER S. ROOT, Professor of Physiology; B.S.,

Wesleyan, 1924; Ph.D., Pennsylvania, 1930

HARRY M. ROSE, John E. Borne Professor of Medical and Surgical Research; A.B., Yale, 1928; M.D.,

Cornell, 1932

GEORGE ROSEN, Professor of Public Health Edu-cation; B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947

SEYMOUR ALGUS, D.D.S., Assistant in Dentistry CARLISLE C. BASTIAN, D.D.S., Lecturer in Dentis-

SAM M. BEISER, Ph.D., Assistant Professor of Microbiology

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HARRY H. SHAPIRO, Assistant Professor of Anat-

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Health Practice; M.D., Duke University, 1936; M.P.H., Columbia, 1947

LEO STERN, SR., Clinical Professor of Dentistry; D.D.S., New York College of Dentistry, 1912

WELLINGTON B. STEWART, Associate Professor of Pathology; B.S., Notre Dame, 1942; M.D., Rochester, 1945

FRANCES A. STOLL, Associate Professor of Dental Hygiene; R. D. H., Columbia, 1934; B.S., 1944; A.M., 1945; Ed.D., 1949

LEWIS R. STOWE, Professor of Dentistry; D.D.S., Minnesota, 1916

DAVID TANCHESTER, Clinical Professor of Dentistry; D.D.S., New York University, 1921

ARTHUR C. TOTTEN, Professor of D.D.S., Pennsylvania, 1926

FERDINAND A. TUOTI, Assistant Clinical Professor

of Dentistry; D.M.D., Harvard, 1928 HARRY B. VAN DYKE, Hosack Professor of Pharmacology; B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923

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SHIH-CHUN WANG, Professor of Pharmacology; B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

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MARC L. BERG, D.D.S., Assistant in Dentistry GERALD H. BESEN, D.D.S., Assistant in Dentistry ABRAHAM M. BLECHMAN, D.D.S., Assistant in Dentistry

LUCILLE BLUM, Ph.D., Lecturer in Dental Hygiene PAUL BRAZEAU, Ph.D., Assistant Professor of Pharmacology

SEBASTIAN A. BRUNO, D.M.D., Instructor in Dentistry

SKAIDRITE BURKEVICS, R.D.H., Instructor in Dental Hygiene

PANDELIS CAMESAS, D.D.S., Assistant in Dentistry BARBARA CARROLL, R.D.H., Instructor in Dental

JAMES P. CATTELL, M.D., Research Associate in Psychiatry

BERNARD S. CHAIKIN, D.M.D., Lecturer in Den-

CHARLES M. CHAYES, D.D.S., Assistant in Dentistry

ROBERT M. COLE, D.D.S., Assistant in Dentistry GEORGE B. CROZAT, D.D.S., Lecturer in Dentistry KENNETH C. DEESEN, D.D.S., Instructor in Dentistry

JOSEPH C. DE LISI, D.D.S., Instructor in Dentistry ROBERT DRELICH, D.D.S., Instructor in Anatomy JOSEPH D. EBY, D.D.S., Lecturer in Dentistry

SOLON A. ELLISON, D.D.S., Associate in Microbiology

ROBERT L. FISHER, D.D.S., Assistant in Dentistry ROGER G. GERRY, D.M.D., Research Assistant in Dentistry

HERMAN GLADSTONE, M.D., Instructor in Anat-

BENJAMIN W. GLICK, M.D., Instructor in Anatomy HENRY M. GOLDMAN, D.M.D., Lecturer in Dentistry

IDA M. GOLOMB, D.D.S., Instructor in Dentistry HAROLD R. HARLAN, D.D.S., M.P.H., Lecturer in Dentistry

STANLEY S. HELLER, D.D.S., Instructor in Dentistry
FREDERICK G. HOFMANN, Ph.D., Assistant Professor of Pharmacology

MARGARET HOLDEN, Ph.D., Associate in Microbiology

SIDNEY L. HOROWITZ, D.D.S., Research Associate in Dentistry

CHRISTIAN A. HOVDE, A.M., Instructor in Anatomy

ROBERT J. HUETTNER, D.D.S., Research Assistant in Dentistry

RUTH K. INNES, R.D.H., Assistant in Dental Hy-

JOSEPH E. JOHNSON, D.D.S., Lecturer in Dentistry SOLOMON L. KATZ, D.D.S., Research Assistant in Dentistry

GEORGE KIRIAKOPOULOS, D.D.S., Assistant in Dentistry

ALICE W. KNOX, Ph.D., Associate in Microbiology SEYMOUR KOSTER, Assistant in Dentistry

ANN R. KOTSUBO, R.D.H., Instructor in Dental Hygiene

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	12

CONDENSED ACADEMIC CALENDAR

1956

September 11	Tuesday, and September 12, Wednesday. Registration	,
	including payment of fees.	

September 17 Monday. Classes begin.

November 6 Tuesday. Election Day. Holiday.

November 22 Thursday. Thanksgiving Day. Holiday.

December 1 Saturday. End of first trimester.

December 3 Monday. Beginning of second trimester.

December 24 Monday, through

1957

January 6 Sunday. Christmas Holidays.

February 22 Friday. Washington's Birthday. Holiday.

March

1 Friday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.

March 2 Saturday. End of second trimester.

March 4 Monday. Beginning of third trimester.

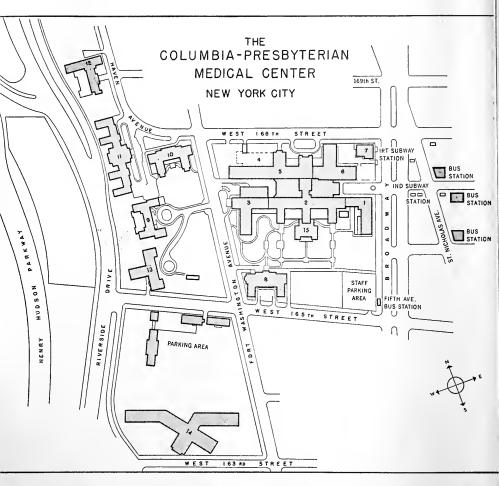
April 15 Monday, through April 21, Sunday. Easter Holidays.

May 25 Saturday. Last day of classes.

May 27 Monday, through June 3, Monday. Final examinations.

May 30 Thursday. Memorial Day. Holiday.

June 4 Tuesday. Conferring of degrees.



- 1. BABIES HOSPITAL
- 2. PRESBYTERIAN HOSPITAL N. Y. ORTHOPAEDIC HOSPITAL SLOANE HOSPITAL SQUIER UROLOGICAL CLINIC
- 3. HARKNESS PAVILION
- 4. POWER HOUSE
- 5. COLLEGE OF PHYSICIANS AND SURGEONS
- 6. VANDERBILT CLINIC SCHOOL OF DENTAL AND ORAL SURGERY
- 7. N. Y. CITY DEPT. OF HEALTH SCHOOL OF PUBLIC HEALTH AND ADMINISTRATIVE MEDICINE
- 8. INSTITUTE OF OPHTHALMOLOGY
- 9. MAXWELL HALL
- 10. NEUROLOGICAL INSTITUTE
- 11. N.Y. STATE PSYCHIATRIC INSTITUTE
- 12. BARD HALL
- 13. HARKNESS MEMORIAL HALL
- 14. FRANCIS DELAFIELD HOSPITAL, N.Y.C.
- 15. PAULINE A. HARTFORD MEMORIAL CHAPEL

COLUMBIA UNIVERSITY

Bulloun of Information SERIES FIFTY-SEVEN

NUMBER TWELVE

MARCH 23, 1957

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COMMUNICATION WITH THE SCHOOL

All communications regarding the School of Dental and Oral Surgery, applications for admission, and appointments for personal interviews should be addressed to the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.; telephone: WAdsworth 3–2500.

BULLETINS

The bulletins of each college or school and of the Summer Session may be obtained without charge by writing to the Office of University Admissions.

Letters requesting more detailed information than is contained in this bulletin and all correspondence regarding admission should be addressed to the Dean, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y.

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2 · FACULTY OF MEDICINE

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THE SCHOOL OF DENTAL AND ORAL SURGERY

Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia University in the City of New York.

In May, 1916, the University issued a pamphlet entitled A Dental School on University Lines. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and the School of Dentistry became an integral part of the University. On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1892) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of Columbia University.

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the school, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral

parts of the College of Physicians and Surgeons and the School.

ADMISSION, REGISTRATION, AND FEES

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$5.00, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York

State Board of Regents:

Se	mester Hours
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within two weeks after notification of acceptance

(see page 6).

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Barnard College. Under the plan of "professional option" students from Barnard College may receive the Bachelor of Arts degree from Barnard College after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the dental school, the student must have completed at Barnard 90 points of academic work which includes all specific requirements, a major of 28 points, and the major examination or major thesis.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar, file a registration blank giving such information as may be required and pay his fees. The periods set aside for registration in each session are stated in the Academic Calendar. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

Tuition fees, the University fee, the student health service fee, and laboratory deposits are payable each session in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$3.00 will be imposed.

The following annual fees for the full program for a candidate for the D.D.S. degree are prescribed by statute and are subject to change at any time at the discretion of the Trustees. The fees to be paid by students who are not enrolled for the full program will be assessed by the Registrar as provided by the University statutes.

University fee Tuition fee \$ 48.00

Student health service fee

This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance (unless the student is already covered by hospital insurance) and to pay part of the cost of the student health service

25.00

Instrument case rental (for sophomores, juniors, and seniors)	\$ 5.00
Application fees	
For processing application for admission	5.00
For each deficiency or special examination	10.00
For renewal of application for a degree (see below)	1.00

Late fees

Late rees	
For late registration	3.00
For late application for a deficiency or special examination	5.00
For late application, or renewal of application, for a degree	5.00

Rebates

The University fee, the student health service fee, application fees, and late fees are not subject to rebate. If a student withdraws from the University, a partial return of tuition fees may be authorized by the Registrar. When a rebate is allowed, it will be reckoned from the day on which the Registrar receives written notice from the student.

Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Renewal of application for a degree. An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that a candidate chooses to come up for consideration.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The tuition, room, board, books, and laundry figures are based upon rates which prevailed during 1956–1957 and can be accepted as applicable in general for the year 1957–1958 unless national economic changes require their alteration.

	Average	Minimum
Tuition fee	\$ 900	\$ 900
Miscellaneous fees	78	78
Room	330	225
Board	600	500
Books	150	115
Instruments (see below)		
Laundry	75	35
	\$2,133	\$1,853

In the freshman year, instruments will cost about \$800; in the sophomore year, about \$1,100; in the junior year, about \$300; in the senior year, about \$90. Estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small

sections, conferences, and the comprehensive case method of instruction.

Subjects*	Class Hours	Lab. or Clin. Hours	Total Hours
FIRST YEAR			
Anatomy			
Embryology 152F	22		22
Gross 151FS	50	220	270
Microscopic 150FS	42	126	168
Neuro 153S	20	28	48
Oral 101FS	20	90	110
Oral Microscopic 115S	24	48	72
Biochemistry 150FS	36	108	144
Crown and Bridge 104T	11	66	77
Dental Materials 125T	II	22	33
Operative Dentistry 130T	II	66	77
Prosthetic Dentistry 156T	II	99	110
Theory and Practice		99	
Dental History 287T	11		11
Total			1,142
10000			1,142
SECOND YEAR			
Crown and Bridge 105FST	11	132	143
Dental Materials 126F	11	22	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	132	154
Pathology 150ST	54	144	198
Periodontology 151T	11	55	66
Pharmacology 150ST	55	33	88
Physiology 150FS	56	153	209
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^{*} Letter following course number designates trimester; F=first; S=second; and T=third.

Subjects*	Class Hours	Lab. or Clin. Hours	Total Hours
•			
Prosthetic Dentistry 157FST	II	132	143
Psychiatry 150S	11		I 1
Surgery, Principles 168S	11		II
Surgery, Oral 270AT	11		11
Total			1,199
THIRD YEAR			
Anatomy, Maxillofacial 252S	11		II
Crown and Bridge			
Technic 205F		85	85
Clinic 206ST	II	110	121
Applied Occlusal Dynamics 212T	30		30
Diagnosis 212FST	33	25	58
Operative Dentistry 233FST	20	245	265
Orthodontics 241S	22	60	82
Pathology, Oral 246F	22	60	82
Periodontology 251S	11	30	41
Practice of Medicine 278T	22	30	52
Prosthetic Dentistry 260FT and 261FST	22	165	187
Radiology 267F	I I	15	26
Surgery, Oral 270BF	ΙΙ	20	31
Theory and Practice			
Therapeutics 286T	11		11
Total			1,082
FOURTH YEAR			
Crown and Bridge 210S and 211FST	11	130	141
Diagnosis 213F		25	25
Diagnosis Seminar 214S		30	30
Diagnosis 215T	11	3	II
Orthodontics 242FST		30	30
Operative Dentistry 234FST	22	313	335
Pedodontics 202FST	22	82	104
Periodontology 252FS and 253F	22	30	52
Prosthetic Dentistry 263FST and 264T	11	130	141
Public Health 222ST	22		22
Surgery, Oral 272FST	44	90	134
Surgery, Seminar 274T	II		11
Surgical Prosthesis 265S	11	19	30
Theory and Practice			J
Clinical Oral Physiology 283F	11		II
Ethics, Jurisprudence and			
Practice Administration 281ST	33		33
Comprehensive 285T			
Total			1,110

^{*} Letter following course number designates trimester; F=first; S=second; and T=third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 8 and 9 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101—Oral anatomy. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115—Oral microscopic anatomy and embryology. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150-Microscopic anatomy. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151—Gross anatomy. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152—Embryology. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153-Neuroanatomy. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252-Maxillofacial anatomy. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150—Introductory biochemistry. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126—Physical properties of dental materials. Freshman and Sophomore year.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

DIAGNOSIS

Diagnosis 212—Dental diagnosis lectures and clinic. Junior year.

Lectures and clinical practice in diagnostic procedures, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity.

Diagnosis 213—Dental diagnosis clinic. Senior year.

Continuation of clinic of Diagnosis 212.

Diagnosis 214—Diagnosis seminar. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity.

Diagnosis 215—Diagnosis seminar, Senior year.

Continuation of Diagnosis 214.

MEDICINE

Medicine 278—General survey of medicine. Junior year.

Lectures and conferences covering fundamentals of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151—General medical microbiology and immunology. Sophomore year. Lectures, conferences, and laboratory.

Microbiology 152—Principles of microbiology, immunology, and epidemiology. Sophomore year.

This course is identical with Microbiology 105F in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 130—Elements of operative dentistry. Freshman year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 131—Elements of operative dentistry. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233—Operative clinical practice. Junior year.

Introduction to clinical practice, Lectures on the application of operative fundamentals to clinical practice, Clinical practice and demonstrations,

Operative Dentistry 234—Advanced clinical practice. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241—Principles of orthodontics. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion in orthodontics by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and constructing of removable appliances used as space maintainers and habit breakers and to correcting tooth alignment in preparation for restorative dentistry and treatment of periodontal conditions. Clinical practice in the use of appliances constructed in the laboratory.

12 · COURSES OF INSTRUCTION

Orthodontics 242—Orthodontic clinic. Senior year.

Clinical orthodontics.

PATHOLOGY

Pathology 150—General and special pathology. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246—Oral pathology. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247—Oral pathology seminar. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202—Pedodontics lectures and clinic. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151—Periodontia clinic. Sophomore year.

Lectures and clinics on dental prophylactic technique and early disturbances of the periodontium.

Periodontology 251—Periodontia clinic. Junior year.

Lectures and clinics in the diagnosis and treatment of periodontal diseases.

Periodontology 252—Periodontology lectures. Senior year.

Lectures and conferences on the theory and practice of periodontology and periodontal histopathology.

Periodontology 253—Periodontia clinic. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150-Pharmacology. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied. Principles are emphasized so as to furnish a rational basis for therapy by drugs.

PHYSIOLOGY

Physiology 150-Mammalian physiology. Sophomore year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 104 and 105—Crown and bridge lectures and technique. Freshman and Sophomore year respectively.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 156 and 157—Prosthetic lectures and technique. Freshman and Sophomore year respectively.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205—Crown and bridge lectures and technique. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206—Crown and bridge clinic. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210—Crown and bridge lectures. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211—Crown and bridge clinic. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212-Applied occlusal dynamics. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260—Prosthetic lectures. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261—Prosthetic clinic. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263—Prosthetic clinic. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264—Prosthetic lectures. Senior year.

A series of lectures on clinical considerations in partial denture diagnosis, design, and construction.

Prosthetics 265-Surgical prosthesis. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 10—Psychiatry for the dentist. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222—Principles of public health. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

RADIOLOGY

Radiology 267—Oral radiology practice. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

14 · COURSES OF INSTRUCTION

SURGERY

Surgery 168—Principles of surgery. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A—Oral surgery. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B—Oral surgery. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272—Oral surgery. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274—Oral surgery seminar. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and practice 281—Dental ethics, jurisprudence, and practice administration. Senior year.

Lecture and conference course on dental ethics, jurisprudence, economics, office conduct, and practice management.

Theory and Practice 283—Clinical oral physiology. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285—Comprehensive case. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of X-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 286—Therapeutics. Junior year.

Lectures and conferences on drugs and their clinical application.

Theory and Practice 287—Dental history. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

Anatomy: Gross anatomy: One of the following three: Gray's Anatomy; Cunningham, Textbook of Anatomy; or Morris, Human Anatomy. One of the following three dictionaries: Stedman, Gould, or Dorland's American; Cunningham, Manual of Practical Anatomy, Vols. II and III. One of the following four: Grant, Atlas of Anatomy; Truex and Kellner, Detailed Atlas of the Head and Neck; Spalteholz, Hand Atlas of Human Anatomy; or Anson, Atlas of Human Anatomy.

MAXILLOFACIAL ANATOMY: Shapiro, Applied Anatomy of the Head and Neck (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, Developmental Anatomy; Hamilton, Human Embryology; or Patten, Human Embryology.

MICROSCOPIC ANATOMY: Bailey, Textbook of Histology (13th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, Human Neuroanatomy; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, Oral Histology and Embryology; Diamond, Dental Anatomy.

BIOCHEMISTRY: Harrow and Mazur, Textbook of Biochemistry (6th ed.); Karshan, Laboratory Manual of Biochemistry for Dental Students.

DENTAL ETHICS, JURISPRUDENCE, and PRACTICE ADMINISTRATION: Mann and Easlick, Practice Administration for the Dentist; Carnahan, The Dentist and the Law.

DENTAL HISTORY: Brenner, Story of Dentistry (3rd ed.).

Dental Therapeutics: Council on Therapeutics, American Dental Association, Accepted Dental Remedies; McGehee and Green, Pharmacology and Pharmacotherapeutics for Dentists. (Reference: Goodman and Gilman, Pharmacological Basis of Therapeutics, 1955.)

Diagnosis: Thoma, Oral Pathology (4th ed.); Burket, Oral Medicine (2d ed.).

MEDICINE: One of the following two: Cecil and Loeb, Textbook of Medicine (9th ed.); Harrison, Principles of Internal Medicine (2d ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Dubos, Bacterial and Mycotic Infections of Man (2d ed.); Rivers, Viral and Richettsial Diseases of Man 2d ed.).

OPERATIVE DENTISTRY: Black, Operative Dentistry, Vols. I and II (9th ed.); Operative Dentistry Syllabus; Grossman, Root Canal Therapy.

Oral Pathology: Thoma, Oral Pathology (3d ed.); or Kronfeld, Histopathology of the Teeth (4th ed.).

ORTHODONTICS: Salzmann, Principles of Orthodontics.

16 · TEXTBOOKS

Pathology: One of the following four: Boyd, Textbook of Pathology; Karsner, Textbook of Pathology; Moore, Textbook of Pathology; or Anderson, Pathology.

Pedodontics: McBride, Juvenile Dentistry (5th ed.); Brauer et al., Dentistry for Children (3d ed.).

Periodontology: Beube, Periodontology; and Goldman, Periodontia.

PHARMACOLOGY: Goodman and Gilman, Pharmacological Basis of Therapeutics (1955).

Physiology: Bard, Medical Physiology (10th ed.).

PROSTHETIC DENTISTRY: Skinner, Science of Dental Materials; Schlosser and Gehl, Complete Denture Prosthesis; Swenson, Complete Dentures; Tylman, Crown and Bridge Prosthesis; United States Government Printing Office, Physical Properties of Dental Materials; Young et al., Syllabus on Complete Dentures.

PSYCHIATRY: English and Finch, Introduction to Psychiatry; Noyes, Modern Clinical Psychiatry (4th ed., 1953); Strecker, Fundamentals of Psychiatry (5th ed.).

Radiology: McCall and Wald, Clinical Dental Roentgenology (3d ed.).

Surgery: Berger, Principles and Technique of the Removal of Teeth.

Surgical Prosthesis: Beder, Surgical and Maxillofacial Prosthesis.

POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1957–1958 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School of Dental and Oral Surgery is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualified graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which

may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University; anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N. Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Executive Officer, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N. Y.

GENERAL REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is a part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered, nor may any student register after the stated period unless he obtains the written consent of the proper dean or director.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to the proper dean or director for an equitable solution.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper and, subject to the reserved powers of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean or director. Students withdrawing are required to notify the Registrar in writing at once.

The dean or director may, for reasons of weight, grant a leave of absence to a student in good standing.

GRADUATION

All recipients of degrees awarded during the academic year are expected to attend the Commencement exercises in June unless excused. Diplomas are issued at the times stated in the Academic Calendar; those for the degree of Doctor of Philosophy, however, are issued at any time during the year upon completion of requirements by the candidate.

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions

of study in the school.

Students are classified for readmission or promotion under the following headings:

- 1. Recommended for advancement.
- 2. Recommended for readmission to the same class.
- 3. Recommended neither for advancement nor for readmission to the same class:

(a) Because of failure.

(b) Because they fall under paragraph b of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate shall have been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

GENERAL INFORMATION

LIBRARY RESOURCES

The Medical Library occupies part of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred and ten thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-four hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing more than two million volumes, are open to all students of dentistry. The main collection is housed in Butler Library; special and departmental collections are located in various other buildings on the campus. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

Leaflets describing the collections and services of the University Libraries are available in any of the library reading rooms. The Medical Library and all other libraries post their hours of opening.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years, with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the senior student who has shown the greatest proficiency in prosthetic dentistry.

An annual award is made by the Sigma Epsilon Delta Fraternity to the graduating student who, in the opinion of the faculty, shows the greatest promise.

The staff of the Division of Operative Dentistry has established an annual prize for excellence in operative dentistry.

See also "Graduate Courses in the Basic Sciences" on page 17.

Student Loans

Loan funds are provided in a limited amount for the assistance of students, but it is the general policy to grant loans only to students who have satisfactorily completed at least one session of residence at the University. Application is made on a blank which may be obtained from the office of the Dean or of the Bursar. Applications for loans for the winter session should be filed by September 15, for the spring session, by January 15.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and to which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23

South Pearl St., Albany 7, N. Y. All applications for admission to the examination

should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

COURSES FOR DENTAL HYGIENISTS

On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points, complete the course of instruction in the field of dental hygiene.

The course prepares graduates for all types of dental health positions including permanent dental hygiene teachers license in New York State and the educational requirements for dental hygienists in public health as stated in the May 1, 1956 report,

Committee on Education, American Public Health Association.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For further information address the Director, Courses for Dental Hygienists, 630 West

168th Street, New York 32, N. Y.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the

University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge of \$3.00 per session (winter, spring, or summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. The student receives locker privileges, a towel, complete uniform (except shoes), and laundry service.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 2-220, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 P.M. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students, sick at home and living within the immediate vicinity of the Medical Center, may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves

with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N. Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$200 to \$410 for men and \$230 to \$455 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$350 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for

an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$330 to \$650. To be eligible for admission a student must be over twenty-one and must be registered for at least twelve points. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and

guests of members of the University community.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

OFFICERS OF INSTRUCTION

HAROLD A. ABRAMSON, Assistant Clinical Professor of Physiology; A.B., Columbia, 1920; M.D., 1923

THOMAS H. ALLEN, Associate Professor of Physiology; A.B., Iowa, 1936; Ph.D., 1941 FRANZ ALTMANN, Associate Clinical Professor of

Otolaryngology, M.D., Vienna, 1925

VIRGINIA APGAR, Professor of Anesthesiology; A.B., Mt. Holyoke, 1929; M.D., Columbia, 1933

EDMUND APPLEBAUM, Associate Professor of Dental Anatomy; D.D.S., New York College of Dentistry, 1922

HOWARD ARDEN, Assistant Professor of Dentistry;

B.S., Fordham, 1943; D.D.S., Columbia, 1946 HERBERT D. AYERS, Jr., Assistant Clinical Professor of Dentistry; A.B., Columbia, 1929; D.D.S., 1931

MARGARET W. BARNARD, Associate Professor of Public Health Practice; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

HENRY A. BARTELS, Assistant Professor of Oral Pathology; B.S., Rhode Island State, 1917; B.S., Columbia, 1925; D.D.S., 1927 HERBERT BARTELSTONE, Assistant Professor of

Pharmacology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

SAM M. BEISER, Assistant Professor of Microbiology; Ph.D., Columbia, 1951

JAMES W. BENFIELD, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1945

FRANK E. BEUBE, Clinical Professor of Dentistry; L.D.S., D.D.S., Toronto, 1930

PAUL BRAZEAU, Assistant Professor of Pharmacol-

ogy; A.B., Columbia, 1947; Ph.D., 1952 HAROLD W. BROWN, Professor of Parasitology; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936

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CONDENSED ACADEMIC CALENDAR

1957

September 10	Tuesday, and	September 11,	Wednesday.	Registration,
	including p	ayment of fees.		

September 16 Monday. Classes begin.

November 5 Tuesday, Election Day, Holiday,

November 28 Thursday, Thanksgiving Day, Holiday.

November 30 Saturday. End of first trimester.

December 2 Monday. Beginning of second trimester.

December 23 Monday, through

1958

January	5	Sunday.	Christmas	Holidays.
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February 22 Saturday. Washington's Birthday. Holiday.

March 1 Saturday. End of second trimester.

March

3 Monday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June. The privilege of later application may be granted on payment of a late fee.

March 3 Monday. Beginning of third trimester.

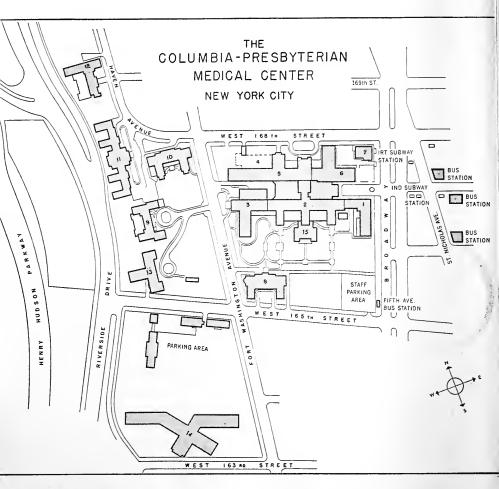
March 31 Monday, through April 6, Sunday. Easter Holidays.

May 24 Saturday. Last day of classes.

May 26 Monday, through June 2, Monday. Final examinations.

May 30 Friday. Memorial Day. Holiday.

June 3 Tuesday. Conferring of degrees.



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CONDENSED ACADEMIC CALENDAR, 1958–1959

September 8 Monday, and September 9, Tuesday. Registration, including payment of fees.

September 15 Monday. Classes begin.

November 4 Tuesday. Election Day. Holiday.

November 27 Thursday. Thanksgiving Day. Holiday.

November 29 Saturday. End of first trimester.

December 1 Monday. Beginning of second trimester.

December 22 Monday, through January 4, 1959, Sunday. Christmas Holidays.

February 23 Monday. Washington's Birthday. Holiday.

February 28 Saturday. End of second trimester.

March

2 Monday. Last day for filing application or renewal of application for all degrees and certificates, except doctoral degrees, to be conferred in June.

The privilege of later application may be granted on payment of a late fee.

March 2 Monday. Beginning of third trimester.

March 23 Monday, through March 29, Sunday. Easter Holidays.

May 23 Saturday. Last day of classes.

May 25 Monday, through May 29, Friday. Final examinations.

May 30 Saturday. Memorial Day. Holiday. June 2 Tuesday. Conferring of degrees.

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Columbia University was founded in 1754 as King's College by royal grant of George II, King of England, "for the Instruction of Youth in the Learned Languages, and the Liberal Arts and Sciences." The Revolutionary War interrupted its active work, but in 1784 it was reopened as Columbia College. In 1912 the title was changed to Columbia

University in the City of New York.

In May, 1916, the University issued a pamphlet entitled A Dental School on University Lines. In this pamphlet the University stated its intent to establish a school of dentistry in affiliation and coordination with the School of Medicine. The pamphlet's introductory statement outlined the University's policy for dental education, which has been consistently followed: "Dentistry and Dental Education are on the threshold of extraordinary development but are unable to take advantage of their opportunities because of the traditional separation of dentistry and medicine. Dentistry has been shown by recent investigation and research to be logically a branch of general medicine."

In September, 1916, students in dentistry were admitted to courses in Columbia University at the School of Medicine. On March 5, 1917, the Trustees of the University established a school of dentistry as of September 27, 1916, and the School of Dentistry became an integral part of the University. On July 1, 1923, the College of Dental and Oral Surgery of New York (organized in 1892) was merged with the School of Dentistry, and the combined institutions named the School of Dental and Oral Surgery of

Columbia University.

In September, 1928, the school was moved to the Columbia University-Presbyterian Hospital Medical Center, where the dental department of the School occupies three floors. The fundamental science subjects, which are given to both dental and medical students, are taught in the adjoining College of Physicians and Surgeons, the corridors of the two schools being continuous. In adjacent wings, the halls of which are also continuous with those of the School, the wards and outpatient departments of the Presbyterian and associated hospitals are located, thus giving the closest possible contact and association with all branches of health service. The Dental School clinic includes as one

of its functions the dental care of the patients of the Medical Center hospitals.

In order to strengthen the instruction of dental and medical students and to fulfill a further step in the integration of dental education and research with the medical program at the Columbia-Presbyterian Medical Center which was visualized when the Dental School was made a part of the Center in 1928, the faculties of the two schools were merged July 1, 1945. This faculty is responsible for the educational programs in medicine, dentistry, public health, and nursing. A committee on dental education, established by University statute, of which a majority is from the Department of Dental and Oral Surgery and of which the Associate Dean for Dental and Oral Surgery is the chairman, initiates recommendations to the faculty on the qualifications and admission requirements for dental students, the curriculum of instruction, the candidates for the degree of Doctor of Dental Surgery, and other educational matters dealing with dentistry.

The course in dentistry covers four academic years and leads to the degree of Doctor of Dental Surgery. The greater part of the first two years of the curriculum is taken in the fundamental science departments of instruction in the University, which are integral

parts of the College of Physicians and Surgeons and the School.

ADMISSION, REGISTRATION, AND FEES

Application. It is desirable that candidates make application during the academic year preceding that for which they seek admission. It is not necessary to complete the academic requirements before making application. However, all requirements must be completed before matriculation. Application blanks will be furnished by the Office of the Committee on Admissions of the School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application should be accompanied by a check or money order for \$10, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited to tuition.

The minimum requirement for admission to the first-year class is the satisfactory completion of three full years at an acceptable college of arts and sciences, which must include the satisfactory completion of the following courses required by the New York

State Board of Regents:

	Semester Hours
English composition and literature	6
Physics	6
Biology	6
Chemistry (inorganic)	6
Chemistry (an approved course in organic chemistry)	6

A point or semester hour is the equivalent of one hour of lecture or recitation plus two hours of outside work or three hours of laboratory work per week, per semester. Suitable laboratory work must be included in each of the courses in science.

Inasmuch as an understanding of the biological sciences is based upon the knowledge of the underlying sciences of chemistry, physics, and biology, students are urged, so far as time permits, to take additional courses in quantitative, qualitative, physical, and organic chemistry, physics, comparative anatomy, and other advanced courses in biology, as well as courses in mathematics, German and French, sociology, history, and other subjects of general cultural and scientific value. Courses in fine and industrial arts are also useful.

Owing to the limited number of students who can be accommodated, completion of the requirements for entrance does not guarantee admission. The entire college record of each student is carefully examined by the Committee on Admissions in order that those who are judged most capable of meeting the exacting demands of the course and of the profession of dentistry may be selected. Preference will be given in the selection of students to those who present to the Committee on Admissions evidence of high achievement in selected college courses of special predental value and who, in the opinion of the Committee on Admissions, are most likely to succeed in dentistry, rather than to those who present the largest number of course credits or those who have limited their preparation to the prescribed subjects. Acceptance of a student for admission is based on grounds of character and health as well as on the fulfillment of academic requirements.

An acceptance fee of \$50 is payable within one month after notification of acceptance

(see page 6)

All applicants will be required to take the Dental Aptitude Tests conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

COMBINED COURSES

Combined courses with Barnard College. Under the plan of "professional option" students from Barnard College may receive the Bachelor of Arts degree from Barnard College after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the dental school, the student must have completed at Barnard 90 points of academic work which includes all specific requirements, a major of 28 points, and the major examination or major thesis.

Combined courses with the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of ninety-four points, including all the courses prescribed for the Bachelor of Science degree, not less than sixty-four of which have been received for work in Columbia University.

Combined courses in dentistry and medicine. It is usually possible for a graduate of a registered medical school with the degree of Doctor of Medicine to meet the requirements of the school and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

ADMISSION OF FOREIGN STUDENTS

The State Department of Education has special requirements with which students who are not citizens of this country must comply. Any foreign student desiring to apply to the School of Dental and Oral Surgery should communicate with the Dean.

REGISTRATION

Before attending University courses, every student must present himself at the Office of the Registrar, file a registration blank giving such information as may be required, and pay his fees. The periods set aside for registration in each session are stated in the Academic Calendar. Registration at a later date is permitted only with the written permission of the Dean, satisfactory cause for the delay having been shown.

FEES

Tuition fees, the University fee, the student health service fee, and laboratory deposits are payable each session in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$3.00 will be imposed.

The following annual fees for the full program for a candidate for the D.D.S. degree are prescribed by statute and are subject to change at any time at the discretion of the Trustees. The fees to be paid by students who are not enrolled for the full program will

be assessed by the Registrar as provided by the University statutes.

University fee Tuition fee

48.00

1,100.00

Student health service fee

This fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance (unless the student is already covered by hospital insurance) and to pay part of the cost of the student health service

25.00

Application fees

For admission	10.00
For each deficiency or special examination	10.00
For renewal of application for a degree (see below)	1.00

Late fees

For late registration	3.00
For late application for a deficiency or special examination	5.00
For late application, or renewal of application, for a degree	5.00

Rebates

The University fee, the student health service fee, application fees, and late fees are not subject to rebate. If a student withdraws from the University, a partial return of tuition fees may be authorized by the Registrar. When a rebate is allowed, it will be reckoned from the day on which the Registrar receives written notice from the student.

Undue breakage

While no deposit is required of students to cover laboratory material and ordinary breakage, any unusual amount of breakage will be charged.

Renewal of application for a degree. An application for a degree, other than the several doctoral degrees, terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that a candidate chooses to come up for consideration.

Acceptance fee. Within one week after an applicant has been notified that his application has been accepted, he must notify the Dean that he intends to matriculate and accompany his communication with a check or money order for \$50, payable to Columbia University. This acceptance fee will belong to the University and if the applicant does not register at the school for the specific session, it will not be returned. If he registers at the school at the next enrollment of entering students, the amount of the acceptance fee will be deducted from his tuition fees for that session.

Fees for repeated courses. Students obliged to repeat the work for any year are required to pay the full tuition fee.

DENTAL EQUIPMENT

Instruments and supplies. Each student is required to supply himself with instruments as specified in the official instrument list. The purchase from the University of instruments in original package outfits has been made compulsory, and unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. The students will not be allowed to purchase more than is required to complete a case. The quantity and quality are selected with a view to the best possible results and conservation of the student's best interests.

Microscopes. All students entering the School of Dental and Oral Surgery are required to provide themselves with microscopes of a satisfactory type. A microscope of standard make fitted with the following attachments will fill the requirements:

- a. Triple nosepiece.
- b. Abbe or variable focus condenser.
- c. 10x and 6x oculars.
- d. 16 mm. and 4 mm. objectives.
- e. Oil immersion lens.

Lockers. Each student will be assigned a locker on entering and will be required to use a combination lock as prescribed by the school.

ESTIMATED EXPENSES

An itemized estimate of the average expenses of a full-time student for an academic year in the School of Dental and Oral Surgery exclusive of travel, clothing, amusements, charity, organizations, and sundries is given below. These items are, of course, variable but should not be overlooked in estimating the total expense. The room, board, books, instrument, and laundry figures are based upon rates which prevailed during 1957–1958 and can be accepted as applicable in general for the year 1958–1959 unless national economic changes require their alteration.

	Average	Minimum
Tuition and fees	\$1,178	\$1,178
Room	35°	300
Board	550	475
Books and instruments (see below)		
Laundry	132	100

In the freshman year, instruments will cost about \$960; in the sophomore year, about \$550; in the junior year, about \$450; in the senior year, about \$90. Estimates are subject to correction as the basic prices of supplies and instruments change. Instruments are to be paid for at the opening of the academic year. The cost of books will vary, depending upon the choice made from the selection offered. In the freshman year, the approximate cost of books will be \$200; in the sophomore year, about \$100; in the junior year, about \$135; in the senior year, about \$30.

PLAN OF INSTRUCTION

The curriculum is arranged with the object of providing the student with the necessary opportunities for acquiring a knowledge of the fundamental sciences in relation to dentistry and the techniques of approach in dental problems. Beginning in the first two academic years with a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology, the student prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skills required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of the dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by means of the division of classes into small

sections, conferences, and the comprehensive case method of instruction.

	Class	Lab. or	Total
Subjects*	Hours	Clin. Hours	Hour.
FIRST YEAR			
Anatomy			
Embryology 152F	22		22
Gross 151FS	50	220	270
Microscopic 150FS	42	126	168
Neuro 153S	20	28	48
Oral 101FS	20	90	110
Oral Microscopic 115S	24	48	72
Biochemistry 150FS	36	108	144
Crown and Bridge 104T	11	66	77
Dental Materials 125T	11	22	33
Operative Dentistry 130T	11	66	77
Prosthetic Dentistry 156T	11	99	110
Theory and Practice			
Dental History 287T	11		11
Total			1,142
1 out			1,142
SECOND YEAR			
Crown and Bridge 105FST	11	132	143
Dental Materials 126F	11	22	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	132	154
Pathology 150ST	54	144	198
Periodontology 151T	11	55	66
Pharmacology 150ST	55	33	88
Physiology 150FS	56	153	209

^{*} Letter following course number designates trimester; F=first; S=second; and T=third.

^{*} Letter following course number designates trimester; F=first; S=second; and T=third.

COURSES OF INSTRUCTION

For purposes of instruction the work of each academic year is scheduled in three sessions of eleven weeks each, which are designated as First, Second, and Third Trimesters.

For a detailed statement of the content of each course, the student is referred to the departmental statements which follow.

The outline on pages 8 and 9 shows the work required of a candidate for the degree of Doctor of Dental Surgery. The University reserves the right to make such changes in the program of studies at any time as experience may prove desirable.

ANATOMY

Anatomy 101. Oral anatomy

Professor Arden and staff. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151. Gross anatomy

Professor Rogers and staff. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152. Embryology

Professor Copenhaver and staff. Freshman year.

Lectures and demonstrations dealing with the dynamics of vertebrate development, with particular reference to mammals and man.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to Anatomy 106S in the Medical School.

Anatomy 252. Maxillofacial anatomy

Professor Shapiro. Junior year.

Lectures and demonstrations. A review course with special application to the problems of the major fields of dentistry.

BIOCHEMISTRY

Biochemistry 150. Introductory biochemistry

Professor Karshan. Freshman year.

Lectures and laboratory. A study of the chemistry of life processes with special reference to the animal organism.

DENTAL MATERIALS

Dental Materials 126. Physical properties of dental materials

Professor Ayers. Freshman and sophomore years.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

MEDICINE

Medicine 278. General survey of medicine

Professor Rankow and members of the Presbyterian Hospital staff. Junior year.

Lectures and conferences covering fundamentals of general medicine; also clinics in which patients are studied for conspicuous manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Dr. Ellison. Sophomore year.

Lectures, conferences, and laboratory,

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Dr. Ellison. Sophomore year.

This course is identical with *Microbiology* 105F in the Medical School except that lectures on the mouth bacteria are substituted for several of those of the medical series.

OPERATIVE DENTISTRY

Operative Dentistry 130. Elements of operative dentistry

Professor Cain and staff. Freshman year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 131. Elements of operative dentistry

Professor Cain and staff. Sophomore year.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Oman and staff. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professor Di Salvo and staff. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

12 · COURSES OF INSTRUCTION

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Senior year.

Clinical practice in the use of appliances constructed in the laboratory.

PATHOLOGY

Pathology 150. General and special pathology

Professor Lunin. Sophomore year.

A study of important pathological conditions, demonstrated by museum specimens and a very complete series of histological preparations.

Pathology 246. Oral pathology

Professors Cahn and Lunin. Junior year.

Lectures, conferences, and laboratory work on the diseases of the jaws, mouth, and teeth.

Pathology 247. Oral pathology seminar

Professor Cahn. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202. Pedodontics lectures and clinic

Professor Rosenstein and staff. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures and clinic

Professor Beube and staff. Sophomore year.

Lectures and seminars in the diagnosis, etiology, and treatment of periodontal diseases. Clinical practice in dental prophylaxis and subgingival curettage.

Periodontology 251. Periodontia lectures and clinic

Professor Beube and staff. Junior year.

Lectures and seminars—continuation of *Periodontology* 151. Clinical practice in various periodontal treatments.

Periodontology 252. Periodontia lectures and clinic

Professor Beube and staff. Senior year.

Continuation of Periodontology 251.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Senior year.

Work in clinics in the diagnosis and treatment of advanced periodontal diseases.

PHARMACOLOGY

Pharmacology 150. Pharmacology

The staff. Sophomore year.

Lectures, conferences, and laboratory. In this course the pharmacological action of drugs on man and lower animals is studied. Principles are emphasized so as to furnish a rational basis for therapy by drugs.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Root and staff. Sophomore year.

Lectures, conferences, and laboratory.

PROSTHETIC DENTISTRY

Prosthetics 104 and 105. Crown and bridge lectures and technique

Professor Arden and staff. Freshman and sophomore years.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 156 and 157. Prosthetic lectures and technique

Professor Arden and staff. Freshman and sophomore years.

Lectures and technical procedures in full and partial denture construction.

Prosthetics 205. Crown and bridge lectures and technique

Professor Herlands. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206. Crown and bridge clinic

Professor Herlands and staff. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210. Crown and bridge lectures

Professor Herlands. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211. Crown and bridge clinic

Professor Smith and staff. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261. Prosthetic clinic

Professor Lucca and staff. Junior year.

Clinical construction of full and partial dentures.

Prosthetics 263. Prosthetic clinic

Professor Smith and staff. Senior year.

Clinical construction of full and partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Senior year.

A series of lectures on clinical consideration in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Dr. Bruno. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Senior year.

Survey course in the theory and practice of preventive medicine, dentistry, and public health. Fundamental principles of administration, statistics, epidemiology, industrial hygiene, and sanitation. The principles and problems of dental health practice are emphasized.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professor Zegarelli and staff. Junior year.

Lectures and clinical practice in diagnostic methods, comprehensive diagnosis, pulp symptomatology, radiographic interpretation, and diagnosis of lesions and diseases of the oral cavity and jaws.

Diagnosis 213. Diagnosis clinic

The staff. Senior year.

Continuation of clinic of Diagnosis 212.

Diagnosis 214. Diagnosis seminar

Professor Zegarelli. Senior year.

Discussion and differential diagnosis of diseases of the oral cavity and jaws.

Diagnosis 215. Diagnosis seminar

Professor Zegarelli and staff. Senior year.

Continuation of Diagnosis 214.

Radiology 267. Oral radiology practice

Professor Budowsky and staff. Junior year.

Lectures, readings, and discussions on topics relative to oral radiology. Practice in exposing, processing, and mounting dental radiographs.

Therapeutics 286.

Dr. Kutscher. Junior year.

Lectures and conferences on drugs and their clinical application.

SURGERY

Surgery 168. Principles of surgery

Professor Rankow. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A. Oral surgery

Professor Rothenberg. Sophomore year.

Lectures and seminars on local anesthesia and removal of teeth.

Surgery 270B. Oral surgery

Professor Savoy and staff. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth.

Surgery 272. Oral surgery

Professor Savoy and staff. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274. Oral surgery seminar

Professors Savoy, Rankow, and staff. Senior year. Required.

Lectures and seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 280. Dental ethics, jurisprudence, and practice administration Professor Hunt. Junior year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration Professor Hunt. Senior year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and clinical conferences.

Theory and Practice 285. Comprehensive case

The staff. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. Dental history

Professor Schwartz. Freshman year.

Lectures and conferences on the development of the scientific and technical principles of modern dentistry.

TEXTBOOKS

The following list includes most of the books normally used. As a rule, only the latest editions of the textbooks should be purchased. Students are warned against buying any books until specifically advised by the departments concerned.

Anatomy: Gross anatomy: One of the following three: Gray's Anatomy; Cunningham, Textbook of Anatomy; or Morris, Human Anatomy. One of the following three dictionaries: Stedman, Gould, or Dorland's American. Cunningham, Manual of Practical Anatomy, Vols. II and III. One of the following four: Grant, Atlas of Anatomy; Truex and Kellner, Detailed Atlas of the Head and Neck; Spalteholz, Hand Atlas of Human Anatomy; or Anson, Atlas of Human Anatomy.

MAXILLOFACIAL ANATOMY: Shapiro, Applied Anatomy of the Head and Neck (1954 ed.).

EMBRYOLOGY: One of the following three: Arey, Developmental Anatomy; Hamilton, Human Embryology; or Patten, Human Embryology.

MICROSCOPIC ANATOMY: Bailey, Textbook of Histology (14th ed.); mimeographed laboratory manual.

NEUROANATOMY: Strong and Elwyn, Human Neuroanatomy; mimeographed laboratory manual.

ORAL HISTOLOGY AND EMBRYOLOGY: Orban, Oral Histology and Embryology; Diamond, Dental Anatomy.

BIOCHEMISTRY: Harrow and Mazur, Textbook of Biochemistry (7th ed.); Karshan, Laboratory Manual of Biochemistry for Dental Students.

Dental Ethics, Jurisprudence, and Practice Administration: Mann and Easlick, Practice Administration for the Dentist; Carnahan, The Dentist and the Law.

DENTAL HISTORY: Brenner, Story of Dentistry (3d ed.).

Dental Therapeutics: Council on Therapeutics, American Dental Association, Accepted Dental Remedies. (Reference: Goodman and Gilman, Pharmacological Basis of Therapeutics, 1955.)

Diagnosis: Thoma, Oral Pathology (4th ed.); Burket, Oral Medicine (2d ed.); Bernier, The Management of Oral Disease.

MEDICINE: One of the following two: Cecil and Loeb, Textbook of Medicine (9th ed.); Harrison, Principles of Internal Medicine (3d ed.).

MICROBIOLOGY: Laboratory Manual in Microbiology and Immunology; Dubos, Bacterial and Mycotic Infections of Man (3d ed.); Rivers, Viral and Rickettsial Diseases of Man (3d ed.).

OPERATIVE DENTISTRY: Black, Operative Dentistry, Vols. I and II (9th ed.); Operative Dentistry Syllabus; Grossman, Root Canal Therapy.

Oral Pathology: Thoma, Oral Pathology (3d ed.); or Kronfeld, Histopathology of the Teeth (4th ed.).

- ORYHODONTICS: Salzmann, Orthodontics, Principles and Prevention; Vol. 1 (1957).
- Pathology: One of the following three: Boyd, Textbook of Pathology; Karsner, Text-book of Pathology; or Anderson, Pathology.
- PEDODONTICS: Brauer et al., Dentistry for Children (3d ed.).
- Periodontology: Beube, Periodontology; and Goldman, Periodontia.
- PHARMACOLOGY: Goodman and Gilman, Pharmacological Basis of Therapeutics (1955).
- Physiology: Bard, Medical Physiology (10th ed.).
- PROSTHETIC DENTISTRY: Skinner, Science of Dental Materials; Schlosser and Gehl, Complete Denture Prosthesis; Swenson, Complete Dentures; Tylman, Crown and Bridge Prosthesis; United States Government Printing Office, Physical Properties of Dental Materials.
- PSYCHIATRY: English and Finch, Introduction to Psychiatry (2d ed.); Noyes and Kolb, Modern Clinical Psychiatry (5th ed., 1958).
- RADIOLOGY: McCall and Wald, Clinical Dental Roentgenology (3d ed.).
- Surgery: Berger, Principles and Technique of the Removal of Teeth; Archer, A Manual of Oral Surgery; Monheim, Local Anaesthesia and Pain Control in Dental Practice.
- SURGICAL PROSTHESIS: Beder, Surgical and Maxillofacial Prosthesis.

POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1958–1959 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School of Dental and Oral Surgery is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, an organized sixteen-month course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which

may be obtained from the Dean, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Executive Officer, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

GENERAL REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the session for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is a part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered, nor may any student register after the stated period unless he obtains the written

consent of the proper dean or director.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to the proper dean or director for an equitable solution.

REQUIREMENTS FOR PROMOTION

a) A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the class officers of instruction under whom he has studied during the preceding year.

b) The School of Dental and Oral Surgery reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions

of study in the school.

Students are classified for readmission or promotion under the following headings:

- 1. Recommended for advancement.
- 2. Recommended for readmission to the same class.
- 3. Recommended neither for advancement nor for readmission to the same class:

(a) Because of failure.

(b) Because they fall under paragraph b of requirements for promotion.

GRADING OF STUDENTS

The following grade equivalents are used: A, excellent; B, good; C, fair; F, failure.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems advisable. The disciplinary authority of the University is vested in the President in such cases as he deems proper and, subject to the reserved powers of the President, in the dean of each faculty and the director of the work of each administrative board.

WITHDRAWAL

An honorable discharge will always be granted to any student in good academic standing, and not subject to discipline, who may desire to withdraw from the University; but no student under the age of twenty-one years shall be entitled to a discharge without the assent of his parent or guardian furnished in writing to the proper dean or director. Students withdrawing are required to notify the Registrar in writing at once.

The dean or director may, for reasons of weight, grant a leave of absence to a student in good standing.

REQUIREMENTS FOR GRADUATION

In addition to complying with the requirements for admission and to completing the required work of the curriculum, each candidate for the degree of Doctor of Dental Surgery must present satisfactory evidence as required by law of good moral character and of having attained the age of twenty-one years. If the candidate has been admitted to advanced standing, he must have spent not less than four academic years or their equivalent in approved medical or dental colleges in the study of the subjects making up the curriculum of the School of Dental and Oral Surgery.

No degree will be granted to a student who has not registered for and attended at Columbia University courses of instruction equivalent to at least one academic year of full-time work.

Diplomas are issued at the times stated in the Academic Calendar; those for the degree of Doctor of Philosophy, however, are issued at any time during the year upon completion of requirements by the candidate.

GENERAL INFORMATION

LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature (both books and journals) for faculty and students, and it aids in research through its own collections of current and historical works and through its unique bibliographic service.

The Library contains approximately two hundred and fifteen thousand volumes of books and journals, some five thousand pamphlets, and about two thousand lantern slides on the history of medicine. More than twenty-five hundred periodicals are received regularly. A professional library staff is available to aid students, faculty, and research workers in the Schools of Medicine, Dentistry, Nursing, Public Health and Administrative Medicine, and the hospitals of the Medical Center.

The libraries on Morningside Heights, containing about three million volumes, are open to all students. They include collections on biology, chemistry, physics, psychology, sociology, and other subjects related to medicine and dentistry and supplement the special collections available in the Medical Library. Books may be borrowed for home use.

The Medical Library is open Monday through Friday, 8:30 a.m. to 10 p.m.; Saturday, 9 a.m. to 6 p.m.; and Sunday, 12 m. to 5 p.m. during the academic year. Each of the other libraries posts the hours it is open.

FINANCIAL AID AND PRIZES

Three Ellis Fellowships are awarded annually to qualified graduates of any of the colleges of recognized rank in the state of Vermont. The holders of these fellowships may pursue resident graduate studies under any one of the graduate schools maintained by the University and are eligible for reappointment for no more than two additional years with the proviso that a holder of the fellowship who is a student in medicine may be eligible for reappointment for no more than three additional years. The annual stipend is \$1,500. Applications should be submitted on or before February 20 on blanks to be filed with the Office of University Admissions.

The Van Woert Scholarship Fund was established by the alumni of the School of Dental and Oral Surgery in 1940. The award is given annually to a senior student in the dental school who stands high in scholastic attainments, in personal character, and in potentiality of being a credit to Columbia University and the dental profession.

A prize known as the Ella Maria Ewell Medal is awarded annually to the student of the School of Dental and Oral Surgery who, in the judgment of the faculty, is most proficient in some subject of dentistry.

The Alumni Association makes an annual award of the Rowe-Wiberg Medal to the senior student who has shown the greatest proficiency in prosthetic dentistry.

The William Bailey Dunning Medal, established by the Alumni Association in 1957, is awarded annually to the senior student most proficient in periodontology.

The staff of the Division of Operative Dentistry gives an annual prize for excellence in operative dentistry.

See also "Graduate Courses in the Basic Sciences" on page 18.

Student Loans

Long-term loans at low interest rates are available for tuition and fees, and under certain circumstances, for living expenses. Students who need loans for the winter session should file application with the Bursar, 310 University Hall, by September 1; for the winter session, by December 15. Only in rare instances will applications be considered after these dates.

Student Employment

Owing to the heavy schedule of the Dental School, it is difficult for dental students to undertake outside part-time work during the academic year and, so far as practical, other financial arrangements should be made.

STUDENT ORGANIZATIONS

Blanks for the registration of student organizations, other than those for which the responsibility is assumed by a faculty or department of instruction, may be obtained at the room assignment desk in the Office of the Registrar, 315 University Hall.

Such student organizations come under the jurisdiction of the Committee on Student Organizations of the University Council and may be granted the privileges of the use of names in which the name of the University is embodied or suggested and the use of University rooms or grounds for meetings and bulletin boards for announcements, only if they have filed their registration blanks, furnishing the committee with lists of officers and other executive members, statements of purposes, copies of constitutions and bylaws, and information concerning the nature of any affiliation or connection with non-University organizations.

Omicron Kappa Upsilon

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of this organization is to recognize and honor a maximum of 12 percent of the members of the graduating Senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

The William Jarvie Society

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which Sophomores, Juniors, and Seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N. Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

COURSES FOR DENTAL HYGIENISTS

On October 21, 1947, the University Council approved the establishment of the degree of Bachelor of Science to be conferred upon students who, having been admitted on the basis of two years of approved college study covering not less than sixty points, complete the course of instruction in the field of dental hygiene.

The course prepares graduates for all types of dental health positions including permanent dental hygiene teachers' license in New York State and the educational requirements for dental hygienists in public health as stated in the May 1, 1956, report,

Committee on Education, American Public Health Association.

The Master of Science degree in dental hygiene has been established in administration, supervision, and clinical teaching of dental hygiene to fill the demand for women with graduate education who are qualified to assume teaching and supervisory positions in schools for dental hygienists. It also provides opportunity for administrators, supervisors, and instructors presently employed to complete a graduate degree in dental hygiene.

For a special bulletin describing the programs of study address the Director, Courses

for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

UNIVERSITY PRIVILEGES

All students enrolled in the Dental School enjoy the privileges and facilities of the University campus, including access to the gymnasium, and other activities.

The gymnasium is situated on Morningside Heights and is open daily, except Sundays and holidays. Students of the School of Dental and Oral Surgery may enjoy its privileges and have the use of the gymnasium, baths, and private lockers. A service charge of \$3.00 per session (winter, spring, or summer), is charged each student using the facilities of the University gymnasium without formal registration in physical education courses. The student receives locker privileges, a towel, complete uniform (except shoes), and laundry service.

STUDENT HEALTH SERVICE

The Student Health Service is located in Room 2-220, Vanderbilt Clinic. Daily office hours are held for sick students. Emergency treatment after 5 p.m. and on week ends may be obtained in Admitting Emergency, Vanderbilt Clinic. Students sick at home and living within the immediate vicinity of the Medical Center may contact the Physician-in-Charge of the Health Service. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under a hospitalization insurance policy.

RELIGIOUS LIFE

The life of the University community finds religious expression through St. Paul's Chapel and Earl Hall and through the ministry of the Chaplain and those associated with him in his work. The Chaplain of the University is assisted by three religious counselors: the counselor to Protestant students, the counselor to Roman Catholic students, and the counselor to Jewish students.

Daily services are held in the Chapel, and students are urged to familiarize themselves with the schedules, which are conveniently posted.

There are a number of student religious organizations to which the Chaplain and counselors serve as advisers and with which students are cordially urged to affiliate themselves.

The Chaplain and the counselors are especially eager to establish warm personal relations with students and to meet them in consultation, at the Chapel or in their offices in Earl Hall.

HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N. Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$260 to \$425 for men and \$340 to \$485 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$375 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$345 to \$630. To be eligible for admission a student must be over twenty-one and must be registered for at least twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates, available for relatives and guests of members of the University community.

MEDICAL CENTER BOOKSTORE

The Medical Center Bookstore, located on the second floor of the College of Physicians and Surgeons, is maintained for the convenience of the students and staff of the Medical Center schools and hospitals. The store carries a full stock of textbooks and all other student supplies. Substantial savings are effected whenever the rules of manufacturers and publishers permit. The store is open on weekdays from 8:45 A.M. to 5:30 P.M.; Saturdays, 8:45 A.M. to 1:30 P.M.

OFFICERS OF INSTRUCTION

THOMAS H. ALLEN, Associate Professor of Physiology; A.B., Iowa, 1936; Ph.D., 1941

FRANZ ALTMANN, Clinical Professor of Otolaryn-

gology: M.D., Vienna, 1925

VIRGINIA APGAR, Professor of Anesthesiology; A.B., Mt. Holyoke, 1029; M.D., Columbia, 1933 EDMUND APPLEBAUM, Associate Professor of Den-

tal Anatomy; D.D.S., New York College of Dentistry, 1922 HOWARD ARDEN, Associate Professor of Dentistry;

B.S., Fordham, 1943; D.D.S., Columbia, 1946 HERBERT D. AYERS, JR., Associate Clinical Professor of Dentistry; A.B., Columbia, 1929; D.D.S., 1031

MARGARET W. BARNARD, Associate Professor of Public Health Practice; A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935

HERBERT J. BARTELSTONE, Assistant Professor of Pharmacology; B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

SAM M. BEISER, Assistant Professor of Microbiol-

ogy: Ph.D., Columbia, 1951

JAMES W. BENFIELD, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1945

FRANK E. BEUBE, Clinical Professor of Dentistry;

L.D.S., D.D.S., Toronto, 1930

HAROLD W. BROWN, Professor of Parasitology; A.B., Kalamazoo, 1924; M.S., Kansas State, 1925; Sc.D., Johns Hopkins, 1928; M.D., Vanderbilt, 1933; D.P.H., Harvard, 1936; LL.D. (hon.), Puerto Rico, 1954

STANISLAW H. BRZUSTOWICZ, Assistant Clinical Professor of Dentistry; B.S., St. John's, 1940;

D.D.S., Columbia, 1943

JACK BUDOWSKY, Associate Clinical Professor of Dentistry; D.D.S., Columbia, 1943

THEODORE BUNDRANT, Associate Clinical Professor of Dentistry; D.D.S., Howard, 1929

ARTHUR BUSHEL, Adjunct Associate Professor of Dental Public Health Practice; A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947

LESTER R. CAHN, Associate Professor of Oral Pathology; D.D.S., New York College of Dentistry, 1918

EDWARD A. CAIN, JR., Associate Professor of Dentistry; B.S., Fordham, 1942; D.D.S., Columbia,

JAMES P. CATTELL, Assistant Clinical Professor of Psychiatry; A.B., Miami, 1938; M.D., Harvard,

LOUIS J. CIZEK, Associate Professor of Physiology; B.S., Fordham, 1937; M.D., Columbia, 1941

E. GURNEY CLARK, Professor of Epidemiology; A.B., Vanderbilt, 1927; M.D., 1931; M.P.H., Johns Hopkins, 1936; D.P.H., 1944

LOUIS A. COHN, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928

WILFRED M. COPENHAVER, Professor of Anatomy; A.B., Western Maryland, 1921; Ph.D., Yale,

JOSEPH A. CUTTITA, Associate Professor of Dentistry; A.B., Fordham, 1932; M.S., 1936; D.D.S., Columbia, 1939

KOURKEN A. DAGLIAN, Assistant Clinical Professor of Dentistry; B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943

JOSEPH C. DE LISH, Assistant Professor of Dentistry; D.D.S., Columbia, 1953

NICHOLAS A. DISALVO, Professor of Dentistry; B.S., College of the City of N w York, 1042; D.D.S., Columbia, 1915; Ph.D., 1 52

BERNARD F. ERLANGER, Anidant Professor of Microbiology: A.B., College of the City of New York, 1943: A.M., New York University, 1949; Ph.D., Columbia, 1951

JOHN W. FERTIG, Professor of Biostatistics; A.B.,

Ursinus, 1931; Ph.D., Minnesota, 1935

JOSEPH E. FIASCONARO, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1943 MORRIS FIERSTEIN, Associate Clinical Professor of

Dentistry: D.D.S., Columbia, 1921

LEWIS FOX, Associate Clinical Professor of Dentistry; D.D.S., Maryland, 1927

HERBERT P. FRITZ, Assistant Clinical Professor of

Dentistry; B.S., New York University, 1933; D.D.S., Columbia, 1936 HARRY A. GALTON, Clinical Professor of Dentis-

try; D.D.S., Columbia, 1932

LEONARD J. GOLDWATER, Professor of Occupational Medicine; A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S.P.H., Columbia, 1941

ROBERT GOTTSEGEN, Associate Clinical Professor of Dentistry; A.B., Michigan, 1939; D.D.S., Co-

lumbia, 1943

MAGNUS I. GREGERSEN, Dalton Professor of Physiology; A.B., Stanford, 1923; A.M., 1924; Ph.D., Harvard, 1930

ROBERT E. HERLANDS, Associate Professor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944

GEORGE W. HINDELS, Associate Clinical Professor of Dentistry; M.D., Vienna, 1938; D.D.S., Columbia, 1943

LEONARD HIRSCHFELD, Associate Clinical Professor of Dentistry; A.B., Columbia, 1941; D.D.S., 1944

FREDERICK G. HOFMANN, Assistant Professor of Pharmacology; A.B., Michigan, 1943; Ph.D., Harvard, 1952

FRANKLIN HOLLANDER, Assistant Clinical Professor of Physiology; B.S., Columbia, 1919; Ph.D., 1923

ELLEN N. HOSIOSKY, Assistant Clinical Professor of Dentistry; D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947

CALDERON HOWE, Associate Professor of Microbiology; A.B., Yale, 1938; M.D., Harvard, 1942 IRVIN L. HUNT, Jr., Associate Professor of Dentis-

try; D.D.S., Pennsylvania 1929

ALVIN R. JACOBSON, Associate Professor of Sanitary Science; B.S., North Dakota, 1935; M.S., 1937;

Ph.D., Iowa, 1941 JAMES JAY, Associate Clinical Professor of Dentis-try; D.D.S., Pennsylvania, 1940

DOROTHY D. JOHNSON, Assistant Professor of Anatomy; A.B., Bates, 1941; A.M., Vassar, 1943;

Ph.D., Columbia, 1949 ELVIN A. KABAT, Professor of Microbiology; B.S., College of the City of New York, 1932; A.M., Columbia, 1934; Ph.D., 1937

MAXWELL KARSHAN, Associate Professor of Biochemistry; B.S., College of the City of New York, 1917; A.M., Columbia, 1920; Ph.D., 1925

MORRIS KAVELLE, Assistant Clinical Professor of Dentistry; B.S., New York University, 1929; D.D.S., Columbia, 1933

BERTRAM KLATSKIN, Assistant Clinical Professor of Dentistry; A.B., Cornell, 1937; D.D.S., Columbia, 1941

LAWRENCE C. KOLB, Professor of Psychiatry; M.D., Johns Hopkins, 1934

JOSEPH M. LEAVITT, Assistant Clinical Professor of Dentistry; D.D.S., Columbia, 1940

JESSE L. LEFCOURT, Assistant Clinical Professor of Dentistry; B.S., Columbia, 1929; D.D.S., 1931

GEORGE F. LINDIG, Associate Clinical Professor of Dentistry; D.D.S., Minnesota, 1924

FRANCIS J. LOUGHLIN, Assistant Clinical Professor of Dentistry; D.D.S., New York University, 1939

JOHN J. LUCCA, Associate Professor of Dentistry; A.B., New York University, 1941; D.D.S., Colum-

MARTIN LUNIN, Assistant Professor of Oral Pathology; B.S., Oklahoma, 1938; D.D.S., Washington, 1950; M.P.H., Columbia, 1952

IRWIN D. MANDEL, Assistant Clinical Professor of Dentistry; B.S., College of the City of New York,

1942; D.D.S., Columbia, 1945 H. HOUSTON MERRITT, Professor of Neurology; A.B., Vanderbilt, 1922; M.D., Johns Hopkins, 1926; A.M. (hon.), Harvard, 1944

WILLIAM MILLER, Assistant Clinical Professor of Dentistry; B.S., Columbia, 1927; D.D.S., 1931

WILLIAM J. MILLER, Associate Clinical Professor of Dentistry; A.B., New York University, 1940; D.D.S., Columbia, 1943 MELVIN MORRIS, Associate Clinical Professor of

Dentistry; B.S., College of the City of New York,

1934; A.M., Columbia, 1937; D.D.S., 1941 WILLIAM L. NASTUK, Associate Professor of Physiology; B.S., Rutgers, 1939; Ph.D., 1945

ALVIN S. NATHAN, Associate Clinical Professor of Dentistry; D.D.S., Columbia, 1926; B.S., New York University, 1935; A.M., 1938

CHARLES R. NOBACK, Associate Professor of Anatomy; B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942 CARL R. OMAN, Professor of Dentistry; D.D.S.,

Minnesota, 1914

ARMAND OPPENHEIMER, Assistant Clinical Professor of Dentistry; A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929

MAX A. PLEASURE, Associate Clinical Professor of Dentistry; D.D.S., Pennsylvania, 1928; M.S.P.H., Columbia, 1941

ROBIN M. RANKOW, Assistant Clinical Professor of Oral Surgery; D.D.S., Columbia, 1940; M.D., Rochester, 1950

WILLIAM M. ROGERS, Assistant Professor of Anatomy; B.S., Georgia, 1921; Ph.D., Cornell, 1927

WILLIAM S. ROOT, Professor of Physiology; B.S.,

Wesleyan, 1924; Ph.D., Pennsylvania, 1930 HARRY M. ROSE, John E. Borne Professor of Medical and Surgical Research; A.B., Yale, 1928; M.D., Cornell, 1932

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DAVID TANCHESTER, Clinical Professor of Dentistry; D.D.S., New York University, 1921 STUART W. TANENBAUM, Assistant Professor of

Microbiology; B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

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cology; B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923

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JANE ADAMS, A.M., Lecturer in Dental Hygiene PAUL I. ADDISON, D.D.S., Assistant in Dentistry JERRY J. ADELSON, D.D.S., Lecturer in Dentistry SEYMOUR ALGUS, D.D.S., Instructor in Dentistry CARLISLE C. BASTIAN, D.D.S., Lecturer in Dentis-

MARK L. BENES, D.D.S., Assistant in Dentistry MARC L. BERG, D.D.S., Instructor in Dentistry GERALD II. BESEN, D.D.S., Assistant in Dentistry ABRAHAM M. BLECHMAN, D.D.S., Assistant in Dentistry

DAVID BLISTEIN, D.D.S., Assistant in Dentistry HARRY V. BORG, D.D.S., Assistant in Dentistry JACK M. BREUER, D.D.S., Assistant in Dentistry MORTON S. BROD, D.D.S., Assistant in Dentistry SEBASTIAN A. BRUNO, D.M.D., Instructor in Den-FISTEY

PANDELIS CAMESAS, D.D.S., Instructor in Dentistry VICTOR S. CARONIA, D.D.S., Assistant in Dentistry BARBARA CARROLL, R.D.H., Instructor in Dental Hygiene

BERNARD S. CHAIKIN, D.M.D., Lecturer in Dentistry

CHARLES M. CHAYES, D.D.S., Instructor in Dentistry

HAROLD P. COBIN, D.D.S., Instructor in Dentistry ROBERT M. COLE, D.D.S., Assistant in Dentistry KENNETH C. DEESEN, D.D.S., Instructor in Dentistry

SOLON A. ELLISON, D.D.S., Associate in Microbiology

ROBERT L. FISHER, D.D.S., Lecturer in Dentistry HERMAN GLADSTONE, M.D., Instructor in Anat-Omy

BENJAMIN W. GLICK, M.D., Instructor in Anatomy MONROE M. GLIEDMAN, D.D.S., Assistant in Dentistry

RICHARD GLIEDMAN, D.D.S., Assistant in Den-

HENRY M. GOLDMAN, D.M.D., Lecturer in Den-

IDA M. GOLOMB, D.D.S., Instructor in Dentistry HAROLD R. HARLAN, D.D.S., M.P.H., Lecturer in Dentistry

STANLEY S. HELLER, D.D.S., Instructor in Dentis-

MARGARET HOLDEN, Ph.D., Associate in Microbiology SIDNEY L. HOROWITZ, D.D.S., Research Associate

in Dentistry

ROBERT J. HUETTNER, D.D.S., Research Assistant in Dentistry

RUTH K. INNES, R.D.H., Assistant in Dental Hy-Riene

JOSEPH E. JOHNSON, D.D.S., Lecturer in Dentistry NORMAN H. JOONDEPH, D.D.S., Instructor in Dentistry

SOLOMON L. KATZ, D.D.S., Research Assistant in Dentistry ROBERT J. KELLEY, D.D.S., Assistant in Dentistry

EDWARD P. KESSELER, D.D.S., Assistant in Dentistry GEORGE KIRIAKOPOULOS, D.D.S., Instructor in

Dentistry ALICE W. KNOX, Ph.D., Associate in Microbiology

ABRAHAM KOPRUN, D.D.S., Instructor in Dentistry SLYMOUR KOSTER, D.D.S., A sistant in Denti 11) PHILIP KUTNER, D.D.S., Instruct of in Dentistry AUSTIN H. KUTSCHER, D.D.S., Research Associate in Dentistry

HINRY P. LEVY, D.D.S., Instruct or in Anatomy EVALD LINDER, Instructor in Dental Technique JULIUS K. LITTMAN, M.D., Instruct r in Anatomy LOUIS J. LOSCALZO, D.D.S., Instructor in Dentistry JOSEPH LUBAN, D.D.S., Research Applant in Den-Hitry

GEORGE V. LYONS, D.D.S., Instructor in Dentistry HARRIET G. McCORMICK, Ph.D., Leithrer in Dental Hygiene

PATRICIA A. McLEAN, R.D.H., Instructor in Dental Hygiene

LAWRENCE MARDER, D.D.S., Instructor in Dentis-

SAUL MISHELOFF, D.D.S., Lecturer in Dentistry HENRY I. NAHOUM, D.D.S., Instructor in Dentis-

IRVING J. NAIDORF, D.D.S., Instructor in Dentistry

BERNARD NATHANSON, D.D.S., Instructor in Dentistry

HANS H. NEUMANN, M.D., Research Assistant in Dentistry

BISSELL B. PALMER, D.D.S., Lecturer in Public Health and Administrative Medicine

JOHN D. PIRO, D.D.S., Instructor in Dentistry THOMAS W. PORTWAY, D.D.S., Instructor in Dentistry

CURT PROSKAUER, D.M.D., Curator of the Museum, Dental and Oral Surgery

ARNOLD ROSENBERG, D.D.S., Instructor in Dentistry

ARNÓLD C. ROSENBERG, D.D.S., Assistant in Dentistry JANICE SCHREIBER, D.D.S., Assistant in Dentistry

STEVEN SCRIVANI, D.D.S., Instructor in Dentistry JOSEPH SERIO, D.D.S., Instructor in Dentistry BOAZ SHATTAN, D.D.S., Instructor in Dentistry

HERBERT F. SILVERS, D.D.S., Research Associate in Dentistry

OVID SLAVIN, D.D.S., Instructor in Dentistry SOLOMON SNYDER, D.D.S., Assistant in Dentistry ALVIN L. SOLOMON, D.D.S., Assistant in Dentistry WALTER SPENGEMAN, D.D.S., Instructor in Dentistry

GEORGE STEIN, M.D., D.M.D., Research Associate in Dentistry

HARRIET L. STERNBERG, M.S.S., Lecturer in Dental Hygiene

AGATÉ SUURKIVI, D.D.S., Assistant in Dentistry JULIUS TARSHIS, D.D.S., Instructor in Dentistry EUGENE M. TEDALDI, D.D.S., Instructor in Den-

EDWARD E. TELTSCH, D.D.S., Instructor in Dentistry

BENJAMIN TENENBAUM, D.D.S., Research Associate in Dentistry

ENNIO L. UCCELLANI, D.D.S., Instructor in Dentistry

BERNARD H. WASSERMAN, D.D.S., Instructor in Dentistry

CLINICAL ASSISTANTS

Aaron L. Ackerman, D.D.S., M.P.H. Julien W. Anderson, D.D.S. Jerome Bartwink, D.M.D Harold D. Baurmash, D.D.S. Charles L. Berman, D.D.S. Edmund W. Burke, D.D.S. Adeline R. Conti, D.D.S. Robert E. Crowley, D.D.S. Lawrence Daum, D.D.S. Marvin Firdman, D.D.S. Allan L. Firestein, D.D.S. Richard C. Fowler, D.D.S. Saul N. Greenberg, D.D.S. William C. Hudson, Jr., D.D.S. Milton Jaffe, D.D.S. Mortimer Karmiol, D.D.S. Gustave Lasoff, D.D.S.

Seymour Levine, D.D.S. Richard J. Lowell, D.D.S. Louis Mandel, D.D.S. George A. Minervini, D.D.S. Robert S. Neulist, D.D.S. James T. O'Connor, D.D.S. Paul Schneider, D.D.S. Bert B. Schoeneman, D.D.S. Daniel D. Schube, D.D.S. Irving S. Silver, D.D.S. Jerome M. Sorrel, D.M.D. Sam Turof, D.D.S Robert Umans, D.D.S. Russell J. Vanacek, D.D.S. Robert F. Walsh, D.D.S. Issacher Yavelow, D.D.S. Seymour Zeff, D.D.S.

PRESBYTERIAN HOSPITAL DENTAL SERVICE

Director: William J. Savoy

Consultants: Adolph Berger, Houghton Holliday, Carl R. Oman, Joseph Schroff, Albin R. Seidel

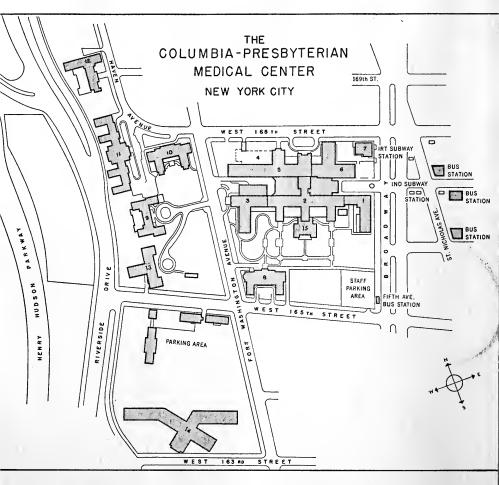
Attending Dental Surgeons: Solomon N. Rosenstein, Gilbert P. Smith, Edward V Zegarelli

Associate Attending Dental Surgeons: Lester R. Cahn, Irvin L. Hunt, Jr., Alvin S. Nathan

Assistant Attending Dental Surgeons: Frank E. Beube, Sebastian A. Bruno, Jack Budowsky, Edward A. Cain, Kourken Daglian, Robert E. Herlands, John Piro, Laszlo Schwartz, Boaz Shattan

PRESBYTERIAN HOSPITAL ORAL SURGERY SERVICE

Robin M. Rankow, D.D.S., M.D., Assistant Attending Surgeon



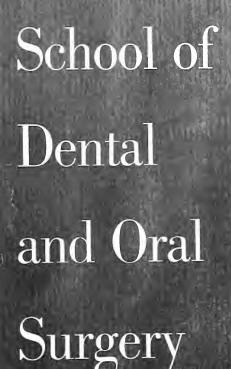
- 1. BABIES HOSPITAL
- 2. PRESBYTERIAN HOSPITAL N. Y. ORTHOPAEDIC HOSPITAL SLOANE HOSPITAL SQUIER UROLOGICAL CLINIC
- 3. HARKNESS PAVILION
- 4. POWER HOUSE
- 5. COLLEGE OF PHYSICIANS AND SURGEONS
- 6. VANDERBILT CLINIC SCHOOL OF DENTAL AND ORAL SURGERY
- 7. N. Y. CITY DEPT. OF HEALTH SCHOOL OF PUBLIC HEALTH AND ADMINISTRATIVE MEDICINE
- B. INSTITUTE OF OPHTHALMOLOGY
- 9. MAXWELL HALL
- 10. NEUROLOGICAL INSTITUTE
- 11. N. Y. STATE PSYCHIATRIC INSTITUTE
- 12. BARD HALL
- 13. HARKNESS MEMORIAL HALL
- 14. FRANCIS DELAFIELD HOSPITAL, N.Y.C.
- 15. PAULINE A. HARTFORD MEMORIAL CHAPEL

COLUMBIA UNIVERSITY BULLETIN

SERIES 59

NUMBER 24

JUNE 13, 1959



ROLUMENT UPIVER

1959-1960

Academic Calendar, 1959-1960

- Sept 8-9 Tuesday-Wednesday. Registration, including payment of fees.*
 14 Monday. Classes begin.
 Nov 3 Tuesday. Election Day. Holiday.
 26 Thursday. Thanksgiving Day. Holiday.
 28 Saturday. First trimester ends.
 - 30 Monday. Second trimester begins.
- Dec 21 Monday, through January 3, 1960, Sunday. Christmas Holidays.
- Feb 27 Saturday. Second trimester ends.
 - Monday. Third trimester begins.
- Mar 1 Tuesday. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June.†
- Apr 11 Monday, through April 17, Sunday. Easter Holidays.
- May 21 Saturday. Last day of classes.
 - **23-27** Monday-Friday. Final examinations.
 - 30 Monday. Memorial Day. Holiday.

COMMENCEMENT

- May 29 Sunday. Baccalaureate Service.
- June 1 Wednesday. Award of degrees and certificates.

Columbia University Bulletin • Series 59 • Number 24 • June 13, 1959 Issued at Columbia University, New York 27, N.Y., weekly from January for forty-five consecutive issues. Second-class postage paid at New York, N.Y.

^{*} Students allowed to register after the period specified must pay a late fee.

[†] Students who file application after this date must pay a late fee.

Columbia University in the City of New York

School of
Dental and
Oral Surgery

1959-1960

The Faculty of Dental and Oral Surgery

Grayson Kirk, Ph.D., LL.D. President of the University

John A. Krout, Ph.D., L.H.D. Vice-President of the University

Jacques Barzun, Ph.D. Dean of Faculties and Provost of the University

H. Houston Merritt, M.D. Vice-President in Charge of Medical Affairs

Gilbert P. Smith, D.D.S. Dean

Howard A. Arden, D.D.S. Associate Professor of Dentistry

Frank E. Beube, L.D.S., D.D.S. Clinical Professor of Dentistry

Edward A. Cain, Jr., D.D.S. Associate Professor of Dentistry

Wilfred M. Copenhaver, Ph.D. Professor of Anatomy

Joseph A. Cuttita, D.D.S. Associate Professor of Dentistry

Nicholas A. Di Salvo, Ph.D., D.D.S. Professor of Dentistry

Harry A. Galton, D.D.S. Clinical Professor of Dentistry

Magnus I. Gregersen, Ph.D. Dalton Professor of Physiology

Robert E. Herlands, D.D.S. Associate Professor of Dentistry

John J. Lucca, D.D.S. Associate Professor of Dentistry

Carl R. Oman, D.D.S. Professor of Dentistry

David Rittenberg, Ph.D. Professor of Biochemistry

Harry M. Rose, M.D. John E. Borne Professor of Medical and Surgical Research

Solomon N. Rosenstein, D.D.S. Professor of Dentistry

William J. Savoy, D.D.S. Clinical Professor of Dentistry

Laszlo Schwartz, D.D.S. Clinical Professor of Dentistry

Harry P. Smith, M.D. Delafield Professor of Pathology

Frances A. Stoll, Ed.D. Associate Professor of Dental Hygiene

Harry B. van Dyke, Ph.D., M.D. Hosack Professor of Pharmacology

Edward V. Zegarelli, D.D.S. Edwin S. Robinson Professor of Dentistry

Program of Study

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellowships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diag-

nosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give the closest possible contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

► POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1959–1960 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteenmonth course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain depart-

ments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Executive Officer, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers two programs of study in dental hygiene. The program for the Bachelor of Science degree includes a minor in public health; it also offers the subjects required by New York State for a permanent dental hygiene teacher's license. The purpose of the program is to give students the wide range of professionl experience available in a large medical center, to perfect dental health techniques, and to provide these educational experiences in an ethical environment. Advanced education leading to the Master of Science degree is provided for those who wish to teach dental hygiene or to fill administrative or supervisory posts in other university schools for dental hygienists.

Columbia was the first university in the United States to offer a program in dental hygiene. From 1918 to 1959, 1,470 women have been graduated from the Courses for Dental Hygienists. Students have enrolled from all states and territories of the United States, as well as from Canada, Germany, Norway, and Sweden.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 101. Oral anatomy

Professor Arden and staff. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151. Gross anatomy

Professor Rogers and staff. Freshman year.

Lectures, conferences, and laboratory.

Anatomy 152. Statistics, genetics, embryology

Professor Copenhaver and staff. Freshman year.

Lectures and demonstrations correlating statistics, genetics, embryology, and adaptations at birth as they relate to principles of human development.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss and Rankow. Junior year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professor Eisenberg. Freshman year.

A study of the chemical constitution of natural products and their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE

Medicine 278. General survey of medicine

Professor Rankow and members of the Presbyterian Hospital staff. Junior year.

The cardinal manifestations of disease are reviewed from the differential diagnostic point of view. The disorders of the various organ systems as well as those resulting from endocrine and metabolic dysfunction are studied. The lectures and conferences are supplemented with clinics in which patients are presented to illustrate the fundamental manifestations of systemic conditions and their significance.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Dr. Ellison. Sophomore year.

Lectures, conferences, and laboratory.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Professor Ellison. Sophomore year.

This course is similar to Microbiology 105F in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professor Di Salvo and staff. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Senior year.

Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY

Pathology 150. General and special pathology

Professor H. P. Smith and staff. Sophomore year.

Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Junior year.

Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202. Pedodontics lectures and clinic

Professor Rosenstein and staff. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Sophomore year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene.

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Junior year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Senior year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253, Periodontia clinic

Professor Beube and staff. Senior year.

Continuation of Periodontology 251 and advanced periodontal surgical techniques.

PHARMACOLOGY

Pharmacology 150. Introduction to pharmacology

The staff. Junior year.

Not given in 1959-1960.

Lectures, conferences, and laboratory. By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Root and staff. Sophomore year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Sophomore year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Senior year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY

Dental Materials 125 and 126. Physical properties of dental materials

Professor Ayers. Freshman and sophomore years.

Lectures and laboratory on the physical and chemical properties of the metals and other materials used in dentistry, with clinical applications.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. Freshman and sophomore years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Oman and staff. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

Prosthetics 104 and 105. Crown and bridge lectures and technique

Professor Arden and staff. Freshman and sophomore years.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157. Prosthetic lectures and technique

Professor Arden and staff. Sophomore year.

Lectures and technical procedures in full and removable partial denture construction.

Prosthetics 205. Crown and bridge lectures and technique

Professor Herlands. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206. Crown and bridge clinic

Professor Herlands and staff. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210. Crown and bridge lectures

Professor Herlands. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211. Crown and bridge clinic

Professor G. P. Smith and staff. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261 and 263. Prosthetic clinic

Professors Lucca and G. P. Smith and staff. Junior and senior years.

Clinical construction of full and partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Senior year.

A series of lectures on clinical consideration in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professors Zegarelli and Cuttita and staff. Junior year.

Lectures on methods of diagnosis, pulp symptomatology, radiographic interpretation, anomalies, and diseases of the mouth and jaws; clinical practice in diagnostic examination and history-taking.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Senior year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatment planning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 214. Diagnosis seminar

Professor Zegarelli. Senior year.

Lectures and discussions on the diseases of the maxilla and mandible and tumors of the mouth; demonstrations of diagnostic techniques.

Diagnosis 215. Diagnosis seminar

Professor Zegarelli and staff. Senior year.

Lectures and discussions on focal infection, psychosomatics in dentistry, and hemorrhagic diseases of the mouth.

Radiology 267. Radiology lectures and clinic

Professor Budowsky and staff. Junior year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Junior year.

Lectures and conferences dealing with the application of pharmacologic principles to clinical practice; indications for therapy, choice of drugs, modes of administration, side reactions, and contraindications are emphasized.

SURGERY

Surgery 168. Principles of surgery

Professor Rankow. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A. Oral surgery

Professor Rothenberg. Sophomore year.

Lectures and seminars on local anesthesia and history of anesthesia; chemistry of various local anesthetic agents; indications for use; infiltration and block techniques described. Basic principles of instrumentation for removal of teeth.

Surgery 270B. Oral surgery

Professor Savoy and staff. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth; lectures on surgical flaps; preparation of the mouth for prosthesis; exodontia technique.

Surgery 272. Oral surgery

Professor Savoy and staff. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274. Oral surgery seminar

Professors Savoy, Rankow, and staff. Senior year. Required.

Seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation of malignancies associated with the oral cavity and facial regions. Preoperative and postoperative case presentations of maxillofacial malignancies.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 280. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Junior year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Senior year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability. malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures. demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz. Freshman year.

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences. The technique of utilizing the literature of dentistry is described.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

► FIRST YEAR		Hours		
	Class	Lab/Clin	Total	
Anatomy 101S		154	154	
Anatomy 115T	24	48	72	
Anatomy 150FS	42	1 2 6	168	
Anatomy 151FS	50	220	270	
Anatomy 152 FST	53		53	
Anatomy 153S	16	32	48	
Biochemistry 150ST	38	114	152	
Dental Materials 125S		33	33	
Operative Dentistry 130ST		106	106	
Prosthetics 104T		92	92	
Theory and Practice 287T	12		12	
TOTAL			1,160	
► SECOND YEAR				
Dental Materials 126T		33	33	
Microbiology 151F and 152F	33	99	132	
Operative Dentistry 131FST	22	198	220	
Pathology 150ST	54	144	198	
Periodontology 151ST	24	42	66	
Physiology 150FS	56	153	209	
Prosthetics 105F		99	99	
Prosthetics 157ST		187	187	
Psychiatry 150S	11		11	
Surgery 168S	11		11	
Surgery 270AT	11		11	
TOTAL			1,177	

► THIRD YEAR	Hours		
	Class	Lab/Clin	Total
Anatomy 252T	I 1		11
Diagnosis 212FST	33	50	83
Medicine 278T	22	22	44
Operative Dentistry 233FST	33	121	154
Orthodontics 241F	22	49	71
Pathology 246F	22	44	66
Periodontology 251S	11	30	41
Pharmacology 150FS	55	33	88
Prosthetics 205F		60	60
Prosthetics 206ST	11	94	105
Prosthetics 212T	30		30
Prosthetics 260FT and 261FST	22	153	175
Radiology 267FS	11	14	25
Surgery 270BFST	11	16	27
Theory and Practice 280T	11		11
Therapeutics 286S	11		11
TOTAL			1,002
► FOURTH YEAR			
Diagnosis 213FS		50	50
Diagnosis 214F		22	22
Diagnosis 215T	11		11
Operative Dentistry 234FST	22	322	344
Orthodontics 242FST		15	15
Pedodontics 202FST	22	91	113
Periodontology 252FS and 253F	22	30	52
Prosthetics 210S and 211FST	11	135	146
Prosthetics 263FST and 264T	11	164	175
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	44	30	74
Surgery 274F	11		11
Theory and Practice 281FT	22		22
Theory and Practice 283T Theory and Practice 285T	11		11
TOTAL			1,098

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York 27, N.Y. Every application must be accompanied by a check or money order for \$10, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Dean.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses required by the State Board of Regents (6 points of each). English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in quantitative, qualitative, physical, and organic chemistry; physics; comparative anatomy. Advanced courses in biology. Courses in mathematics, German and French, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$50 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

- With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.
- With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.
- In medicine and dentistry. It is usually possible for a graduate of a registered medical school who holds the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 8-9, 1959. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work. Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for reasons of weight, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

▶ FEES

Tuition fees, the University fee, the student health service fee, and laboratory deposits are payable each term in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$6.00 will be imposed.

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

University fee	\$ 48.00
Tuition fee	1,100.00
Student health service fee For all full-time students, per academic year (see below)	30.00
Instrument case rental	5.00

APPLICATION FEES AND LATE FEES

Application for admission	\$10.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application for a special examination	5.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student required to repeat the work for any one year must pay the full tuition fee.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition fees that he has paid. The rebate will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The University fee, the student health service fee, application fees, and late fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2–220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR A DEGREE

An application for a degree (except doctoral degrees) terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

▶ ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	Average	Minimum
Tuition and fees for a full program	\$1,183	\$1,183
Room in one of the dormitories	400	250
Board in a University dining hall	550	510

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home probably spend from \$100 to \$150 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the freshman year, \$200; in the sophomore year, \$100; in the junior year, \$135; in the senior year, \$30. Books may be purchased from the Medical Center Bookstore on the second floor of the

College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. Students may not buy more than is required to complete a case. The approximate cost of instruments is: in the freshman year, \$1,200; in the sophomore year, \$450; in the junior year, \$325; in the senior year, \$95. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost.

Microscopes. Each entering student must purchase a satisfactory microscope of standard make, fitted with the following attachments: (a) triple nosepiece; (b) Abbe or variable focus condenser; (c) 10x and 6x oculars; (d) 16 mm. and 4 mm. objectives; (e) oil immersion lens.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for scholarships and grants through the Dean's Office. New students should file application along with the application for admission. Scholarships are awarded to able students who demonstrate their need. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New York, and Vermont) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. Information on any of these loan plans may be obtained from the Office of Financial Aid, 322 University Hall. To insure an early decision, applications should be filed for the autumn term by September 1; for the spring term by December 1.

Deferred payment of tuition may be arranged through the Marine Midland Time Plan. A brochure describing the details of the Plan is issued by the Dean's Office.

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

➤ HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125

Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$250 to \$470 for men and \$285 to \$525 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$375 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$350 to \$700. To be eligible for admission a student must be at least twenty-one years old and must be registered for a minimum of twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

University apartments for married graduate students, at 431 Riverside Drive, will be available for occupancy on or about September 1, 1959. These are one-bedroom, furnished apartments, and it is expected that rates will range from \$125 to \$170 per month including utilities. Requests for information and application forms should be sent to the Residence Halls Office, 125 Livingston Hall.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates to relatives and guests of members of the University community.

► LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 per cent of the members of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which sophomores, juniors, and seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

▶ REGULATIONS

GRADING SYSTEM

The following grading system is used: A, excellent; B, good; C, fair; D, poor but passing; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

Officers of Instruction

ANATOMY

- Edmund Applebaum. Associate Professor of Dental Anatomy D.D.S., New York College of Dentistry, 1922
- Wilfred M. Copenhaver. Professor of Anatomy A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- Dorothy D. Johnson. Assistant Professor of Anatomy A.B., Bates, 1941; M.A., Vassar, 1943; Ph.D., Columbia, 1949
- Melvin L. Moss. Assistant Professor of Anatomy
 A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954
- Charles R. Noback. Associate Professor of Anatomy B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942
- William M. Rogers. Assistant Professor of Anatomy B.S., Georgia, 1921; Ph.D., Cornell, 1927
- S. C. Shen. Assistant Professor of Anatomy
 B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939
- George K. Smelser. Professor of Anatomy A.B., Earlham, 1929; Ph.D., Chicago, 1932

BIOCHEMISTRY

- Max A. Eisenberg. Assistant Professor of Biochemistry
 A.B., Brooklyn, 1938; M.S., New York University, 1941; Ph.D., Duke, 1950
- Maxwell Karshan. Associate Professor of Biochemistry
 B.S., College of the City of New York, 1917; M.A., Columbia, 1920; Ph.D., 1925
- David Rittenberg. Professor of Biochemistry
 B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934

MICROBIOLOGY

- Sam M. Beiser. Associate Professor of Microbiology Ph.D., Columbia, 1951
- Solon A. Ellison. Assistant Professor of Microbiology

 B.S., College of the City of New York, 1942; D.D.S., Columbia, 1946; Ph.D., 1958
- Bernard F. Erlanger. Associate Professor of Microbiology

 A.B., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951
- Gabriel C. Godman. Associate Professor of Microbiology A.B., New York University, 1941; M.D., 1944
- Calderon Howe. Associate Professor of Microbiology A.B., Yale, 1938; M.D., Harvard, 1942

- Elvin A. Kabat. Professor of Microbiology B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937
- Alice W. Knox. Assistant Professor of Microbiology A.B., Vassar, 1927; Ph.D., Columbia, 1951
- Councilman Morgan. Associate Professor of Microbiology B.S., Harvard, 1943; M.D., Columbia, 1946
- Harry M. Rose. John E. Borne Professor of Medical and Surgical Research A.B., Yale, 1928; M.D., Cornell, 1932
- Beatrice C. Seegal. Professor of Microbiology
 A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924
- Stuart W. Tanenbaum. Associate Professor of Microbiology B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

ORAL SURGERY

- Theodore M. Bundrant. Associate Clinical Professor of Dentistry D.D.S., Howard, 1929
- Kourken A. Daglian. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943
- Morris Fierstein. Associate Clinical Professor of Dentistry D.D.S., Columbia, 1921
- Morris Kavelle. Assistant Clinical Professor of Dentistry B.S., New York University, 1929; D.D.S., Columbia, 1933
- Bertram Klatskin. Assistant Clinical Professor of Dentistry A.B., Cornell, 1937; D.D.S., Columbia, 1941
- Alvin S. Nathan. Clinical Professor of Dentistry
 D.D.S., Columbia, 1926; B.S., New York University, 1935; M.A., 1938
- Robin M. Rankow. Assistant Clinical Professor of Oral Surgery D.D.S., Columbia, 1940; M.D., Rochester, 1950
- Fred Rothenberg. Assistant Clinical Professor of Dentistry D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937
- William J. Savoy. Clinical Professor of Dentistry B.S., Manhattan, 1931; D.D.S., Columbia, 1935
- David Tanchester. Clinical Professor of Dentistry (at Montefiore Hospital)
 D.D.S., New York University, 1921

ORTHODONTICS

- Nicholas A. Di Salvo. Professor of Dentistry

 B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- Harry A. Galton. Clinical Professor of Dentistry D.D.S., Columbia, 1932
- Francis J. Loughlin. Assistant Clinical Professor of Dentistry D.D.S., New York University, 1939
- Henry I. Nahoum. Assistant Clinical Professor of Dentistry A.B., Brooklyn, 1940; D.D.S., Columbia, 1943

- Armand Oppenheimer. Assistant Clinical Professor of Dentistry A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- Laszlo Schwartz. Clinical Professor of Dentistry
 B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931
- Julius Tarshis. Assistant Clinical Professor of Dentistry D.D.S., Pennsylvania, 1949
- Clifford L. Whitman. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1927

PATHOLOGY

- Lester R. Cahn. Associate Professor of Oral Pathology D.D.S., New York College of Dentistry, 1918
- Fred V. Lucas. Associate Professor of Pathology A.B., California, 1942; M.D., Rochester, 1950
- Harry P. Smith. Delafield Professor of Pathology A.B., California, 1916; M.S., 1918; M.D., 1921
- Wellington B. Stewart. Associate Professor of Pathology B.S., Notre Dame, 1942; M.D., Rochester, 1945
- George P. Vennart. Assistant Professor of Pathology A.B., Wesleyan, 1948; M.D., Rochester, 1953

PEDODONTICS

- Jerry A. Adelson. Assistant Clinical Professor of Dentistry A.B., Pennsylvania, 1944; D.D.S., New York University, 1951
- Solomon N. Rosenstein. *Professor of Dentistry*B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- Julian Schroff. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934
- William A. Verlin. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1931

PHARMACOLOGY

- Herbert J. Bertelstone. Assistant Professor of Pharmacology B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- Frederick G. Hofmann. Assistant Professor of Pharmacology A.B., Michigan, 1943; Ph.D., Harvard, 1952
- Wilbur H. Sawyer. Associate Professor of Pharmacology M.D., Harvard, 1945; Ph.D., 1950
- Harry B. van Dyke. Hosack Professor of Pharmacology B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923
- Shih-Chun Wang. Professor of Pharmacology
 B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

- Shu Chien. Assistant Professor of Physiology M.B., National Taiwan, 1954; Ph.D., Columbia, 1957
- Magnus I. Gregersen. Dalton Professor of Physiology A.B., Stanford, 1923; M.A., 1924; Ph.D., Harvard, 1930
- Werner R. Loewenstein. Assistant Professor of Physiology B.A., Chile, 1945; D.M.D., Chile, 1950
- William L. Nastuk. Associate Professor of Physiology B.S., Rutgers, 1939; Ph.D., 1945
- Walter S. Root. Professor of Physiology B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- William W. Walcott. Associate Professor of Physiology A.B., Yale, 1933; Ph.D., Columbia, 1944

PSYCHIATRY

- James P. Cattell. Assistant Clinical Professor of Psychiatry A.B., Miami, 1938; M.D., Harvard, 1942
- Lawrence C. Kolb. Professor of Psychiatry M.D., Johns Hopkins, 1934

PUBLIC HEALTH

- Margaret W. Barnard. Associate Professor of Public Health Practice A.B., Smith, 1917; M.D., Cornell, 1923; D.P.H., Johns Hopkins, 1935
- Arthur Bushel. Adjunct Associate Professor of Dental Public Health Practice A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947
- John W. Fertig. Professor of Biostatistics A.B., Ursinus, 1931; Ph.D., Minnesota, 1935
- Leonard J. Goldwater. Professor of Occupational Medicine
 A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., 1937; M.S., Columbia, 1941
- Alvin R. Jacobson. Associate Professor of Sanitary Sciences B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941
- George Rosen. Professor of Public Health Education

 B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H., 1947
- Ray E. Trussell. Joseph R. De Lamar Professor of Administrative Medicine; Associate Dean (Public Health) A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947

RESTORATIVE DENTISTRY

- Howard A. Arden. Associate Professor of Dentistry B.S., Fordham, 1943; D.D.S., Columbia, 1946
- Herbert D. Ayers, Jr. Associate Clinical Professor of Dentistry A.B., Columbia, 1929; D.D.S., 1931

- Sebastian A. Bruno. Assistant Clinical Professor of Dentistry D.M.D., Tufts, 1948
- Stanislaw H. Brzustowicz. Assistant Clinical Professor of Dentistry B.S., St. John's, 1940; D.D.S., Columbia, 1943
- Edward A. Cain, Jr. Associate Professor of Dentistry B.S., Fordham, 1942; D.D.S., Columbia, 1945
- Louis A. Cohn. Associate Clinical Professor of Dentistry D.D.S., Pennsylvania, 1928
- Joseph C. De Lisi. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1952
- Joseph E. Fiasconaro. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1943
- Herbert P. Fritz. Assistant Clinical Professor of Dentistry B.S., New York University, 1933; D.D.S., Columbia, 1936
- Robert E. Herlands. Associate Professor of Dentistry A.B., Columbia, 1941; D.D.S., 1944
- George W. Hindels. Associate Clinical Professor of Dentistry M.D., Vienna, 1938; D.D.S., Columbia, 1943
- Irvin L. Hunt, Jr. Associate Professor of Dentistry D.D.S., Pennsylvania, 1929
- Joseph M. Leavitt. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1940
- George F. Lindig. Associate Clinical Professor of Dentistry D.D.S., Minnesota, 1924
- John J. Lucca. Associate Professor of Dentistry A.B., New York University, 1941; D.D.S., Columbia, 1947
- William Miller. Assistant Clinical Professor of Dentistry B.S., Columbia, 1927; D.D.S., 1931
- William J. Miller. Associate Clinical Professor of Dentistry A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. Assistant Clinical Professor of Dentistry B.A., New York University, 1937; D.D.S., Columbia, 1941
- Carl R. Oman. Professor of Dentistry D.D.S., Minnesota, 1914
- Max A. Pleasure. Associate Clinical Professor of Dentistry D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941
- George Schwendener. Assistant Professor of Dentistry D.D.S., Columbia, 1935
- Harold Sherman. Assistant Clinical Professor of Dentistry
 B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- William H. Silverstein. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1937
- Gilbert P. Smith. Professor of Dentistry; Dean D.D.S., Minnesota, 1927
- Ennio L. Uccellani. Assistant Professor of Dentistry B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

STOMATOLOGY

- Frank E. Beube. Clinical Professor of Dentistry L.D.S., D.D.S., Toronto, 1930
- Jack Budowsky. Associate Clinical Professor of Dentistry D.D.S., Columbia, 1943
- Joseph A. Cuttita. Associate Professor of Dentistry A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939
- Lewis Fox. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1927
- Robert Gottsegen. Associate Clinical Professor of Dentistry A.B., Michigan, 1939; D.D.S., Columbia, 1943
- Leonard Hirschfeld. Associate Clinical Professor of Dentistry A.B., Columbia, 1941; D.D.S., 1944
- Ellen N. Hosiosky. Assistant Clinical Professor of Dentistry D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947
- Austin H. Kutscher. Assistant Clinical Professor of Dentistry B.S., New York University, 1945; D.D.S., Columbia, 1946
- Jesse L. Lefcourt. Assistant Clinical Professor of Dentistry B.S., Columbia, 1929; D.D.S., 1931
- Irwin D. Mandel. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945
- Melvin Morris. Associate Clinical Professor of Dentistry B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941
- Ferdinand A. Tuoti. Assistant Clinical Professor of Dentistry D.M.D., Harvard, 1928
- Edward V. Zegarelli. Edwin S. Robinson Professor of Dentistry A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

RESEARCH ASSOCIATES

Carlos J. Dalmau, M.D. (Psychiatry)
Sidney L. Horowitz, D.D.S.
Herbert F. Silvers, D.D.S.
George Stein, M.D., D.M.D
Benjamin Tenenbaum, D.D.S.

INSTRUCTORS

Seymour Algus, D.D.S.
Barbara O. Alving, M.D. (Physiology)
Julian W. Anderson, D.D.S.
Harold D. Baurmash, D.D.S.
Marc L. Berg, D.D.S.
Pandelis Camesas, D.D.S.
Charles M. Chayes, D.D.S.
Harold P. Cobin, D.D.S.
Kenneth C. Deesen, D.D.S.

INSTRUCTORS (continued)

Patricia Farnsworth, M.S. (Physiology) Herman Gladstone, M.D. (Anatomy) Benjamin W. Glick, M.D. (Anatomy) Ida M. Golomb, D.D.S. Stanley S. Heller, D.D.S. Norman H. Joondeph, D.D.S. George Kiriakopoulos, D.D.S. Seymour Koster, D.D.S. Philip Kutner, D.D.S. Leonard Levine, Ph.D. (Physiology) Henry P. Levy, D.D.S. (Anatomy) Evald Linder (Dental Technic) Julius G. Littman, M.D. (Anatomy) Louis J. Loscalzo, D.D.S.

INSTRUCTORS (continued)

George V. Lyons, D.D.S. Louis Mandel, D.D.S. Lawrence Marder, D.D.S. George A. Minervini, D.D.S.

Gerd Muelheims, M.D. (Physiology) Bernard Nathanson, D.D.S.

Mero Nocenti, Ph.D. (Physiology)

John D. Piro, D.D.S.

Thomas W. Portway, D.D.S.

Arnold Rosenberg, D.D.S.

G. Richard Rowley, Ph.D.

(Physiology)

Janice Schreiber, D.D.S.

Steven Scrivani, D.D.S.

Joseph Serio, D.D.S. Boaz Shattan, D.D.S.

Alvin L. Solomon, D.D.S.

Walter Spengeman, D.D.S.

Eugene M. Tedaldi, D.D.S.

Edward E. Teltsch, D.D.S. Bernard H. Wasserman, D.D.S.

ASSISTANTS

Paul I. Addison, D.D.S. Mark L. Benes, D.D.S. Gerald H. Besen, D.D.S. Abraham M. Blechman, D.D.S. David Blistein, D.D.S. Jack M. Breuer, D.D.S. Morton S. Brod, D.D.S. Victor S. Caronia, D.D.S. Robert M. Cole, D.D.S.

ASSISTANTS (continued)

Marvin Firdman, D.D.S. Monroe M. Gliedman, D.D.S. Richard Gliedman, D.D.S. Albert Green, D.D.S. Robert J. Kelley, D.D.S. Edward P. Kesseler, D.D.S. Robert G. Kroll, D.D.S. Solomon Snyder, D.D.S. Agate Suurkivi, D.D.S. Issacher Yavelow, D.D.S.

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CURATOR OF THE MUSEUM Curt Proskauer, D.M.D.

RESEARCH ASSISTANTS

Robert J. Huettner, D.D.S. Solomon L. Katz, D.D.S. Joseph Luban, D.D.S. Hans H. Neumann, M.D.

► PRESBYTERIAN HOSPITAL DENTAL SERVICE

DIRECTOR: William J. Savoy

CONSULTANTS: Adolph Berger, Houghton Holliday, Carl R. Oman, Joseph Schroff,

Albin R. Seidel

DIAGNOSTIC SERVICE

Attending Dental Surgeon: Edward V. Zegarelli

Associate Attending Dental Surgeon: Joseph A. Cuttita

Assistant Attending Dental Surgeons: Jack Budowsky, Laszlo Schwartz

ORAL SURGERY SERVICE

Attending Dental Surgeon: William J. Savoy

Associate Attending Dental Surgeon: Alvin S. Nathan

Assistant Attending Dental Surgeons: Kourken A. Daglian, Boaz Shattan, Robin

M. Rankow

OPERATIVE DENTISTRY SERVICE

Associate Attending Dental Surgeon: Edward A. Cain, Jr.

PATHOLOGICAL SERVICE

Associate Attending Dental Surgeon: Lester R. Cahn

PEDODONTIC SERVICE

Attending Dental Surgeon: Solomon N. Rosenstein

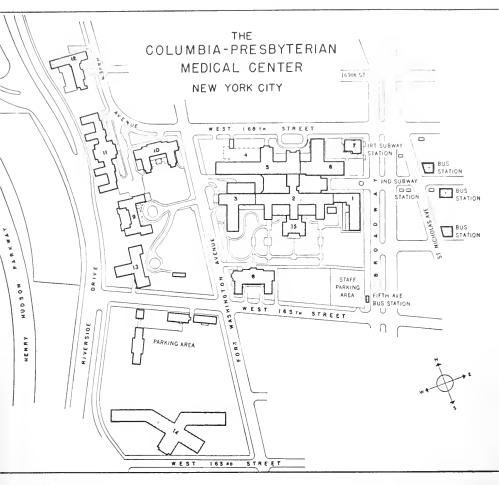
PERIODONTIA SERVICE

Assistant Attending Dental Surgeon: Frank E. Beube

PROSTHODONTIC SERVICE

Attending Dental Surgeon: Gilbert P. Smith

Assistant Attending Dental Surgeons: Sebastian A. Bruno, Robert E. Herlands



- 1. BABIES HOSPITAL
- 2 PRESBYTERIAN HOSPITAL
 N. Y. ORTHOPAEDIC HOSPITAL
 SLOANE HOSPITAL
 SQUIER UROLOGICAL CLINIC
- 3. HARKNESS PAVILION
- 4. POWER HOUSE
- 5. COLLEGE OF PHYSICIANS AND SURGEONS
- 6. VANDERBILT CLINIC SCHOOL OF DENTAL AND ORAL SURGERY
- 7. N. Y. CITY DEPT. OF HEALTH SCHOOL OF PUBLIC HEALTH AND ADMINISTRATIVE MEDICINE
- 8. INSTITUTE OF OPHTHALMOLOGY
- 9. MAXWELL HALL
- 10. NEUROLOGICAL INSTITUTE
- 11. N. Y. STATE PSYCHIATRIC INSTITUTE
- 12. BARD HALL
- 13. HARKNESS MEMORIAL HALL
- 14. FRANCIS DELAFIELD HOSPITAL, N.Y.C.
- 15. PAULINE A. HARTFORD MEMORIAL CHAPEL



WHI KERNBIO Columbia University Bulletin

SERIES 60

NUMBER 32 AUGUST 6, 1960

School of Dental and Oral Surgery

1960-1961

Academic Calendar, 1960-1961

- **Sept 6-7** Tuesday-Wednesday. Registration, including payment of fees. Later registration requires payment of a late fee.
 - 12 Monday. Classes begin.
- Nov 8 Tuesday. Election Day. Holiday.
 - 24 Thursday. Thanksgiving Day. Holiday.
 - 26 Saturday. First trimester ends.
 - 28 Monday. Second trimester begins.
- Dec 19 Monday, through January 2, 1961, Monday. Christmas Holidays.
- Feb 22 Wednesday. Washington's Birthday. Holiday.
 - 25 Saturday. Second trimester ends.
 - 27 Monday. Third trimester begins.
- Mar 1 Wednesday. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June. Later filing of application requires payment of a late fee.
 - 27 Monday, through April 2, Sunday. Easter Holidays.
- May 1 Monday. Last day for filing late application for June degrees.
 - 20 Saturday. Last day of classes.
 - 22-26 Monday-Friday. Final examinations.
 - 30 Tuesday. Memorial Day. Holiday.
- June 6 Tuesday. Award of degrees and certificates.

Columbia University Bulletin · Series 60 · Number 32 · August 6, 1960

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School
of Dental
and
Oral Surgery

The Faculty of Dental and Oral Surgery

Grayson Kirk, Ph.D., LL.D. President of the University

John A. Krout, Ph.D., L.H.D. Vice-President of the University

Jacques Barzun, Ph.D. Dean of Faculties and Provost of the University

H. Houston Merritt, M.D. Vice-President in Charge of Medical Affairs

Gilbert P. Smith, D.D.S. Dean

Howard A. Arden, D.D.S. Associate Professor of Dentistry

Frank E. Beube, L.D.S., D.D.S. Clinical Professor of Dentistry

Edward A. Cain, Jr., D.D.S. Professor of Dentistry

Wilfred M. Copenhaver, Ph.D. Professor of Anatomy

Joseph A. Cuttita, D.D.S. Associate Professor of Dentistry

Nicholas A. Di Salvo, D.D.S., Ph.D. Professor of Dentistry

Rudolph H. Friedrich, D.D.S. Professor of Dentistry

Harry A. Galton, D.D.S. Clinical Professor of Dentistry

Magnus I. Gregersen, Ph.D. Dalton Professor of Physiology

Robert E. Herlands, D.D.S. Professor of Dentistry

John J. Lucca, D.D.S. Associate Professor of Dentistry

Donald G. McKay, M.D. Delafield Professor of Pathology

David Rittenberg, Ph.D. Professor of Biochemistry

Harry M. Rose, M.D. John E. Borne Professor of Medical and Surgical Research

Solomon N. Rosenstein, D.D.S. Professor of Dentistry

William J. Savoy, D.D.S. Clinical Professor of Dentistry

Laszlo Schwartz, D.D.S. Clinical Professor of Dentistry

Frances A. Stoll, Ed.D. Professor of Dental Hygiene

Harry B. van Dyke, Ph.D., M.D. Hosack Professor of Pharmacology

Edward V. Zegarelli, D.D.S. Edwin S. Robinson Professor of Dentistry

Program of Study

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellowships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diag-

nosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give the closest possible contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

► POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1960–1961 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteenmonth course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, and periodontology.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain depart-

ments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers two programs of study in dental hygiene. The program for the Bachelor of Science degree includes a minor in public health; it also offers the subjects required by New York State for a permanent dental hygiene teacher's license. The purpose of the program is to give students the wide range of professionl experience available in a large medical center, to perfect dental health techniques, and to provide these educational experiences in an ethical environment. Advanced education leading to the Master of Science degree is provided for those who wish to teach dental hygiene or to fill administrative or supervisory posts in other university schools for dental hygienists. The programs are open only to women.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. Freshman year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. Freshman year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151. Gross anatomy

Professors Moss, Rogers, and staff. Freshman year.

Regional dissections of the complete body are augmented by lectures stressing functional interpretations. The course is oriented to the basic principles of human biology, with emphasis on pertinent anthropological and clinical topics.

Anatomy 152. Embryology

Professor Copenhaver and staff. Freshman year.

Lectures and demonstrations correlating developmental anatomy with gross anatomy and with microscopic anatomy.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. Freshman year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to *Anatomy 106S* in the Medical School.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss and Rankow. Junior year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professors Eisenberg and Gillespie. Freshman year.

A study of the chemical constitution of natural products and their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE

Medicine and Casualty Care 278 and 279. General survey of medicine; first aid in civil defense

Professor Rankow and members of the Presbyterian Hospital staff. Junior and senior years.

The cardinal manifestations of disease are reviewed from the differential diagnostic point of view. The disorders of the various organ systems as well as those resulting from endocrine and metabolic dysfunction are studied. Emergency lirst-aid measures are presented for management of the casualties in civil defense.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Professor Ellison. Sophomore year.

Laboratory and conferences.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Professor Ellison. Sophomore year.

This course is similar to *Microbiology 105F* in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professor Di Salvo and staff. Junior year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Senior year.

Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY

Pathology 150. General and special pathology

Professor McKay and staff. Sophomore year.

Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Junior year.

Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Senior year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 202. Pedodontics lectures and clinic

Professor Rosenstein and staff. Senior year.

Lectures, conferences, and clinical practice relating to operative dental procedures for children, management of child dental patients, and application of present knowledge of dental development and preventive dentistry.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Sophomore year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene.

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Junior year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Senior year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Senior year.

Continuation of Periodontology 251 and advanced periodontal surgical techniques.

PHARMACOLOGY

Pharmacology 150. Introduction to pharmacology

The staff. Junior year.

By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Root and staff. Sophomore year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist. Professor Cattell. Junior year. Not given in 1960-1961.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy,

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Senior year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY

Anatomy 101. Oral anatomy

Professor Arden and staff. Freshman year.

Lectures on gross anatomy of the teeth and related tissues. Laboratory reproduction of individual teeth in wax. Setting up teeth in occlusion. Restoring anatomy of carious teeth in wax and macroscopic study of structural parts of teeth.

Dental Materials 125 and 126. Physical properties of dental materials

Professor Ayers. Freshman and sophomore years.

Lectures and demonstrations relating the action of the restorative and accessory dental materials with the oral tissues in function.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. Freshman and sophomore years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Junior year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Cain and staff. Senior year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

Prosthetics 104 and 105. Crown and bridge lectures and technique

Professor Arden and staff. Freshman and sophomore years.

Lectures on the technical procedures in crown and bridgework, with practical application, and the construction of bridges and crowns on technique models.

Prosthetics 157. Prosthetic lectures and technique

Professor Arden and staff. Sophomore year.

Lectures and technical procedures in full and removable partial denture construction.

Prosthetics 205. Crown and bridge lectures and technique

Professor Herlands. Junior year.

Lectures on the clinical procedures in crown and bridgework.

Prosthetics 206. Crown and bridge clinic

Professor Herlands and staff. Junior year.

Clinical construction of elementary crown and bridgework.

Prosthetics 210. Crown and bridge lectures

Professor Herlands. Senior year.

Lectures and conferences on various types of bridgework.

Prosthetics 211. Crown and bridge clinic

Professors Smith and Herlands, and staff. Senior year.

Clinical construction of crown and bridgework.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Junior year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Junior year.

Examination, classification, application of anatomical considerations, and clinical procedure in full and partial denture construction.

Prosthetics 261 and 263. Prosthetic lectures

Professors Smith and Lucca, and staff. Junior and senior years.

Clinical construction of full and partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Senior year.

A series of lectures on clinical consideration in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Senior year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professors Zegarelli, Cuttita, and Budowsky. Junior year.

Lectures on methods of diagnosis, pulp symptomatology, radiographic interpretation, anomalies, and diseases of the mouth and jaws; clinical practice in diagnostic examination and history-taking.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Senior year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatmentplanning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 214. Diagnosis lectures

Professor Zegarelli. Senior year.

Lectures and discussions on the diseases of the maxilla and mandible and tumors of the mouth; demonstrations of diagnostic techniques.

Diagnosis 215. Diagnosis lectures

Professor Zegarelli and staff. Senior year.

Lectures and discussions on focal infection, psychosomatics in dentistry, and hemorrhagic diseases of the mouth.

Radiology 267. Radiology lectures and clinic

Professor Budowsky and staff. Junior year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Junior year.

Lectures, conferences, and clinical experience in the application of the principles of pharmacotherapeutics to general practice. The course is specifically integrated with the lectures of *Diagnosis 212* in regard to indications for therapy, choice of drugs, modes of administration, and side reactions.

SURGERY

Surgery 168. Principles of surgery

Professor Rankow. Sophomore year.

Lectures, seminars, and basic principles of general surgery.

Surgery 270A. Oral surgery

Professor Friedrich and staff. Sophomore year.

Lectures and seminars on local anesthesia and history of anesthesia; chemistry of various local anesthetic agents; indications for use; infiltration and block techniques described. Basic principles of instrumentation for removal of teeth.

Surgery 270B. Oral surgery

Professor Friedrich and staff. Junior year.

Demonstrations, lectures, and clinical practice in local anesthesia and the removal of teeth; lectures on surgical flaps; preparation of the mouth for prosthesis; exodontia technique.

Surgery 272. Oral surgery

Professor Friedrich and staff. Senior year.

Lectures and conferences on oral and maxillofacial surgery and general anesthesia.

Clinical practice in local anesthesia and the removal of teeth. Clinical demonstrations in the diagnosis and operative procedures in the treatment of diseases, injuries, and malformation about the face, jaws, and oral cavity.

Surgery 274. Oral surgery seminar

Professor Friedrich and staff. Senior year. Required.

Seminars in diagnosis and treatment-planning in the field of oral surgery. Case presentation of malignancies associated with the oral cavity and facial regions. Preoperative and postoperative case presentations of maxillofacial malignancies.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 280. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Junior year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Senior year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice-building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Senior year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Senior year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz. Freshman year.

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences. The technique of utilizing the literature of dentistry is described.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

► FOR THE CLASSES OF 1961, 1962, AND 1963

SECOND YEAR	Hours		
	Class	Lab/Clin	Total
Dental Materials 126T		33	33
Microbiology 151F and 152F	33	99	132
Operative Dentistry 131FST	22	198	220
Pathology 150ST	54	144	198
Periodontology 151ST	24	42	6 6
Physiology 150FS	56	153	209
Prosthetics 105F		99	99
Prosthetics 157ST		187	187
Surgery 168S	11		11
Surgery 270AT	11		11
<i>c</i> ,			1,166
			1,100
THIRD YEAR			
Anatomy 252T	11		11
Diagnosis 212FST	33	50	83
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	33	121	154
Orthodontics 241F	22	49	71
Pathology 246F	22	44	66
Periodontology 251S	11	30	41
Pharmacology 150FS	55	33	88
Prosthetics 205F		60	60
Prosthetics 206ST	11	94	105
Prosthetics 212T	30		30
Prosthetics 260FT and 261FST	22	153	175
Radiology 267FS	11	14	25
Surgery 270BFST	11	16	27
Theory and Practice 280T	11		11
Therapeutics 286S	11		11

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Theory and Practice 285T

Hours Class Lab/Clin Total Diagnosis 213FS Diagnosis 214F Diagnosis 215T Medicine and Casualty Care 279F Operative Dentistry 234FST Orthodontics 242FST Pedodontics 202FST Periodontology 252FS and 253F Prosthetics 210S and 211FST Prosthetics 263FST and 264T Prosthetics 265T Public Health 222ST Surgery 272FST Surgery 274F Theory and Practice 281FT Theory and Practice 283T

► FOR THE CLASS OF 1964

FIRST YEAR	Hours		
	Class	Lab/Clin	Total
Anatomy 101ST		123	123
Anatomy 115ST	24	48	72
Anatomy 150FS	42	126	168
Anatomy 151FS	50	223	273
Anatomy 152F	22		22
Anatomy 153S	22	44	66
Biochemistry 150ST	57	114	171
Operative Dentistry 130T	11	22	33
Physiology 150ST	60	139	199
Theory and Practice 287T	11		11
			1,138
SECOND YEAR			
Dental Materials 125 and 126FS		66	66
Genetics 171F	11		11
Microbiology 151 and 152F	44	99	143
Operative Dentistry 131FST	33	165	198
Pathology 150FS	44	132	176
Pathology 246T	22	44	66
Pharmacology 150T	55	33	88
Prosthetics 104, 105, and 205FS	20	160	180
Prosthetics 157ST	13	175	188
Surgery 168S	11	,	11
Surgery 270AT	11		11

1,138

1,128

THIRD YEAR	Hours		
	Class	Lab/Clin	Total
Anatomy 252T	11		11
Diagnosis 212FST	33	40	73
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	22	229	251
Orthodontics 241F	22	49	71
Periodontology 151 and 251FST	35	97	132
Prosthetics 206FST	11	178	189
Prosthetics 212S	30		30
Prosthetics 260, 261, and 263FST	22	148	170
Psychiatry 150	11		11
Radiology 267FST	11	14	25
Statistics 291F	11		11
Surgery 270B	11	16	27
Theory and Practice 280T	11		11
Therapeutics 286S	11		11
1			1.067
			1,067
FOURTH YEAR			
Diagnosis 213FST	22	25	47
Diagnosis 214 and 215F	33		33
Medicine and Casualty Care 279F	9		9
Operative Dentistry 234FST	22	333	355
Orthodontics 242FST		17	17
Pedodontics 202FST	22	91	113
Periodontology 252FS	22	71	22
Periodontology 253		30	30
Prosthetics 210S	11		11
Prosthetics 211FST	• •	150	150
Prosthetics 264T	11	150	11
Prosthetics 261 and 263FST	• •	151	151
Prosthetics 265T	11	19	30
Public Health 222ST	22	17	22
Surgery 272FST	33	50	83
Surgery 274F	11	50	11
Theory and Practice 281FS	22		22
Theory and Practice 283T	11		11
Theory and Practice 285FST	**		11
11101 / 11101100 1100101			

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application must be accompanied by a check or money order for \$15, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Dean.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses required by the State Board of Regents (6 points of each). English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in quantitative, qualitative, physical, and organic chemistry; physics; comparative anatomy. Advanced courses in biology. Courses in mathematics, German and French, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$200 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.

With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.

In medicine and dentistry. It is usually possible for a graduate of a registered medical school who holds the degree of Doctor of Medicine to meet the requirements of the School and receive the degree of Doctor of Dental Surgery by the satisfactory completion of a special two-year course, which may include one summer session.

▶ REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 6–7, 1960. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for reasons of weight, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

▶ FEES

Tuition, the comprehensive fee, the student health service fee, and laboratory deposits are payable each term in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$6.00 will be imposed.

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

Comprehensive fee	\$ 100.00
Tuition	1,350.00
Student health service fee	37.80
For all full-time students, per academic year (see below)	

APPLICATION FEES AND LATE FEES

Application for admission	\$15.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application for a special examination	5.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student who is required to repeat the work for any one year must pay the full tuition.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition fees that he has paid. The rebate will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The comprehensive fee, the student health service fee, application fees, late fees, and special fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2–220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR THE D.D.S. DEGREE

An application for the D.D.S. degree terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

▶ ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	Average	Minimum
Tuition and fees for a full program	\$1,487.80	\$1,487.80
Room in one of the dormitories	400.00	250.00
Board in a University dining hall	550.00	510.00

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home probably spend from \$100 to \$150 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the freshman year, \$200; in the sophomore year, \$100; in the junior year, \$135; in the senior year, \$45. Books may be purchased from the Medical Center Bookstore on the second floor of the

College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. Students may not buy more than is required to complete a case. The approximate cost of instruments is: in the freshman year, \$650; in the sophomore year, \$550; in the junior year, \$450; in the senior year, \$120. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost.

Microscopes. Each entering student must purchase a satisfactory microscope of standard make, fitted with the following attachments: (a) triple nosepiece; (b) Abbe or variable focus condenser; (c) 10x and 6x oculars; (d) 16 mm. and 4 mm. objectives; (e) oil immersion lens.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for grants through the Dean's Office. New students should file application along with the application for admission. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to

apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New York, and Vermont) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. Information on any of these loan plans may be obtained from the Office of Financial Aid, 322 University Hall. To insure an early decision, applications should be filed for the autumn term by September 1; for the spring term by December 1.

Deferred payment of tuition may be arranged through the Marine Midland Time Plan. A brochure describing the details of the Plan is issued by the Dean's Office.

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

▶ HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125

Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$250 to \$470 for men and \$285 to \$525 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$400 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred students, both foreign and American. Rates for the academic year are \$350 to \$700. To be eligible for admission a student must be at least twenty-one years old and must be registered for a minimum of twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

In Woodbridge Hall, at 431 Riverside Drive, are one-bedroom, furnished apartments, which are rented for a twelve-month period to married graduate students. The rates range from \$1,260 to \$1,620 a year, including utilities. For further information and application forms write the Residence Halls Office, 125 Livingston Hall.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates to relatives and guests of members of the University community.

► LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

► STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity, was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 per cent of the members of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which sophomores, juniors, and seniors are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

▶ REGULATIONS

GRADING SYSTEM

The following grading system is used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

Officers of Instruction

ANATOMY

- Wilfred M. Copenhaver. Professor of Anatomy; Chairman of the Department A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- Edmund Applebaum. Associate Professor of Dental Anatomy D.D.S., New York College of Dentistry, 1922
- Dorothy D. Johnson. Assistant Professor of Anatomy A.B., Bates, 1941; M.A., Vassar, 1943; Ph.D., Columbia, 1949
- Melvin L. Moss. Assistant Professor of Anatomy
 A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954
- Charles R. Noback. Associate Professor of Anatomy B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942
- William M. Rogers. Assistant Professor of Anatomy B.S., Georgia, 1921; Ph.D., Cornell, 1927
- S. C. Shen. Assistant Professor of Anatomy
 B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939
- George K. Smelser. Professor of Anatomy A.B., Earlham, 1929; Ph.D., Chicago, 1932

BIOCHEMISTRY

- David Rittenberg. Professor of Biochemistry; Chairman of the Department B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934
- Max A. Eisenberg. Assistant Professor of Biochemistry
 A.B., Brooklyn, 1938; M.S., New York University, 1941; Ph.D., Duke, 1950
- Horace B. Gillespie. Assistant Professor of Biochemistry A.B., Lawrence, 1925; Ph.D., Illinois, 1930

MICROBIOLOGY

- Harry M. Rose. John E. Borne Professor of Medical and Surgical Research; Chairman of the Department A.B., Yale, 1928; M.D., Cornell, 1932
- Sam M. Beiser. Associate Professor of Microbiology Ph.D., Columbia, 1951
- Solon A. Ellison. Assistant Professor of MicrobiologyB.S., College of the City of New York, 1942; D.D.S., Columbia, 1946; Ph.D., 1958
- Bernard F. Erlanger. Associate Professor of Microbiology

 A.B., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951
- Gabriel C. Godman. Associate Professor of Microbiology A.B., New York University, 1941; M.D., 1944

- Calderon Howe. Associate Professor of Microbiology A.B., Yale, 1938; M.D., Harvard, 1942
- Elvin A. Kabat. Professor of Microbiology
 B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937
- Alice W. Knox. Assistant Professor of Microbiology A.B., Vassar, 1927; Ph.D., Columbia, 1951
- Councilman Morgan. Associate Professor of Microbiology B.S., Harvard, 1943; M.D., Columbia, 1946
- Beatrice C. Seegal. *Professor of Microbiology*A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924
- Stuart W. Tanenbaum. Associate Professor of Microbiology B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

ORAL SURGERY

- Rudolph H. Friedrich. Professor of Dentistry; Director of the Division D.D.S., Northwestern, 1930
- Theodore M. Bundrant. Associate Clinical Professor of Dentistry D.D.S., Howard, 1929
- Kourken A. Daglian. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943
- Morris Fierstein. Associate Clinical Professor of Dentistry D.D.S., Columbia, 1921
- Morris Kavelle. Assistant Clinical Professor of Dentistry B.S., New York University, 1929; D.D.S., Columbia, 1933
- Bertram Klatskin. Assistant Clinical Professor of Dentistry A.B., Cornell, 1937; D.D.S., Columbia, 1941
- Alvin S. Nathan. Clinical Professor of Dentistry D.D.S., Columbia, 1926; B.S., New York University, 1935; M.A., 1938
- Robin M. Rankow. Assistant Clinical Professor of Oral Surgery D.D.S., Columbia, 1940; M.D., Rochester, 1950
- Fred Rothenberg. Assistant Clinical Professor of Dentistry D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937
- William J. Savoy. Clinical Professor of Dentistry B.S., Manhattan, 1931; D.D.S., Columbia, 1935
- David Tanchester. Clinical Professor of Dentistry (at Montefiore Hospital)
 D.D.S., New York University, 1921

ORTHODONTICS

- Nicholas A. Di Salvo. Professor of Dentistry; Director of the Division B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- Charles M. Chayes. Assistant Clinical Professor of Dentistry A.B., New York University, 1937; D.D.S., Columbia, 1941
- Harold P. Cobin. Assistant Clinical Professor of Dentistry B.S., St. John's (Annapolis), 1927; D.D.S., Columbia, 1931

- Harry A. Galton. Clinical Professor of Dentistry D.D.S., Columbia, 1932
- Francis J. Loughlin. Assistant Clinical Professor of Dentistry D.D.S., New York University, 1939
- Henry I. Nahoum. Assistant Clinical Professor of Dentistry A.B., Brooklyn, 1940; D.D.S., Columbia, 1943
- Armand Oppenheimer. Assistant Clinical Professor of Dentistry A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- Laszlo Schwartz. Clinical Professor of Dentistry
 B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931
- Walter G. Spengeman. Assistant Clinical Professor of Dentistry A.B., Columbia, 1938; D.D.S., Columbia, 1941
- Julius Tarshis. Assistant Clinical Professor of Dentistry D.D.S., Pennsylvania, 1949
- Clifford L. Whitman. Clinical Professor of Dentistry D.D.S., Maryland, 1927

PATHOLOGY

- Donald G. McKay. Delafield Professor of Pathology; Chairman of the Department A.B., California, 1943; M.D., 1945
- Lester R. Cahn. Associate Professor of Oral Pathology D.D.S., New York College of Dentistry, 1918

PEDODONTICS

- Solomon N. Rosenstein. Professor of Dentistry; Director of the Division B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- Jerry A. Adelson. Assistant Clinical Professor of Dentistry A.B., Pennsylvania, 1944; D.D.S., New York University, 1951
- Julian Schroff. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934
- William A. Verlin. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1931

PHARMACOLOGY

Harry B. van Dyke. David Hosack Professor of Pharmacology; Chairman of the Department

B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923

- Herbert J. Bartelstone. Assistant Professor of Pharmacology B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1960
- Frederick G. Hofmann. Assistant Professor of Pharmacology A.B., Michigan, 1943; Ph.D., Harvard, 1952
- Wilbur H. Sawyer. Associate Professor of Pharmacology M.D., Harvard, 1945; Ph.D., 1950
- Shih-Chun Wang. Professor of Pharmacology
 B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

- Magnus I. Gregersen. John C. Dalton Professor of Physiology; Chairman of the Department
 - A.B., Stanford, 1923; M.A., 1924; Ph.D., Harvard, 1930
- Shu Chien. Assistant Professor of Physiology M.B., National Taiwan, 1954; Ph.D., Columbia, 1957
- Louis J. Cizek. Associate Professor of Physiology B.S., Fordham, 1937; M.D., Columbia, 1941
- Robert J. Dellenback. Assistant Professor of Physiology A.B., California (Los Angeles), 1950; M.A., 1953; Ph.D., 1955
- Werner R. Loewenstein. Associate Professor of Physiology B.A., Chile, 1945; D.M.D., Chile, 1950
- William L. Nastuk. Professor of Physiology B.S., Rutgers, 1939; Ph.D., 1945
- Mero Nocenti. Assistant Professor of Physiology A.B., West Virginia, 1951; M.S., 1952; Ph.D., Rutgers, 1955
- Walter S. Root. Professor of Physiology B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- William W. Walcott. Associate Professor of Physiology A.B., Yale, 1933; Ph.D., Columbia, 1944

PSYCHIATRY

- Lawrence C. Kolb. Professor of Psychiatry; Chairman of the Department M.D., Johns Hopkins, 1934
- James P. Cattell. Assistant Clinical Professor of Psychiatry A.B., Miami, 1938; M.D., Harvard, 1942

PUBLIC HEALTH

- Ray E. Trussell. Joseph R. De Lamar Professor of Administrative Medicine; Associate Dean (Public Health) of the Faculty of Medicine A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947
- Arthur Bushel. Adjunct Associate Professor of Dental Public Health Practice A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947
- John W. Fertig. Professor of Biostatistics A.B., Ursinus, 1931; Ph.D., Minnesota, 1935
- Leonard J. Goldwater. Professor of Occupational Medicine
 A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., Columbia, 1937; M.S., 1941
- Alvin R. Jacobson. Associate Professor of Sanitary Sciences B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941
- George Rosen. Professor of Public Health Education
 B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H.,
 1947

RESTORATIVE DENTISTRY

- Gilbert P. Smith. Professor of Dentistry; Director of the Division; Dean of the Faculty
- D.D.S., Minnesota, 1927
- Howard A. Arden. Associate Professor of Dentistry B.S., Fordham, 1943; D.D.S., Columbia, 1946
- Herbert D. Ayers, Jr. Associate Clinical Professor of Dentistry A.B., Columbia, 1929; D.D.S., 1931
- James W. Benfield. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1945
- Sebastian A. Bruno. Assistant Clinical Professor of Dentistry D.M.D., Tufts, 1948
- Stanislaw H. Brzustowicz. Assistant Clinical Professor of Dentistry B.S., St. John's, 1940; D.D.S., Columbia, 1943
- Edward A. Cain, Jr. Professor of Dentistry B.S., Fordham, 1942; D.D.S., Columbia, 1945
- Louis A. Cohn. Associate Clinical Professor of Dentistry D.D.S., Pennsylvania, 1928
- Joseph C. De Lisi. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1952
- Joseph E. Fiasconaro. Assistant Clinical Professor of Dentistry*
 D.D.S., Columbia, 1943
- Herbert P. Fritz. Assistant Clinical Professor of Dentistry B.S., New York University, 1933; D.D.S., Columbia, 1936
- Robert E. Herlands. Professor of Dentistry A.B., Columbia, 1941; D.D.S., 1944
- George W. Hindels. Associate Clinical Professor of Dentistry M.D., Vienna, 1938; D.D.S., Columbia, 1943
- Irvin L. Hunt, Jr. Associate Professor of Dentistry D.D.S., Pennsylvania, 1929
- Joseph M. Leavitt. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1940
- George F. Lindig. Associate Clinical Professor of Dentistry D.D.S., Minnesota, 1924
- John J. Lucca. Associate Professor of Dentistry A.B., New York University, 1941; D.D.S., Columbia, 1947
- William Miller. Assistant Clinical Professor of Dentistry B.S., Columbia, 1927; D.D.S., 1931
- William J. Miller. Associate Clinical Professor of Dentistry A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. Assistant Clinical Professor of Dentistry B.A., New York University, 1937; D.D.S., Columbia, 1941
- Max A. Pleasure. Associate Clinical Professor of Dentistry D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941

^{*} On leave, 1960-1961.

- Thomas W. Portway. Assistant Professor of Dentistry B.S., Fordham, 1950; D.D.S., Columbia, 1956
- Harold Sherman. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- William H. Silverstein. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1937
- Ennio L. Uccellani. Assistant Professor of Dentistry B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

STOMATOLOGY

Edward V. Zegarelli. Edwin S. Robinson Professor of Dentistry; Director of the Division

A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

Frank E. Beube. Clinical Professor of Dentistry L.D.S., D.D.S., Toronto, 1930

Jack Budowsky. Associate Clinical Professor of Dentistry D.D.S., Columbia, 1943

Joseph A. Cuttita. Associate Professor of Dentistry A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939

Lewis Fox. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1927

Robert Gottsegen. Associate Clinical Professor of Dentistry A.B., Michigan, 1939; D.D.S., Columbia, 1943

Leonard Hirschfeld. Associate Clinical Professor of Dentistry A.B., Columbia, 1941; D.D.S., 1944

Ellen N. Hosiosky. Assistant Clinical Professor of Dentistry D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947

Austin H. Kutscher. Assistant Professor of Dentistry B.S., New York University, 1945; D.D.S., Columbia, 1946

Irwin D. Mandel. Associate Clinical Professor of Dentistry B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

Melvin L. Morris. Associate Clinical Professor of Dentistry B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941

Ferdinand A. Tuoti. Assistant Clinical Professor of Dentistry D.M.D., Harvard, 1928

RESEARCH ASSOCIATES

Carlos J. Dalmau, M.D. (Psychiatry) Sidney L. Horowitz, D.D.S. Herbert F. Silvers, D.D.S. George Stein, M.D., D.M.D Benjamin Tenenbaum, D.D.S.

INSTRUCTORS

Lionel Abzug, D.D.S. Seymour Algus, D.D.S.

INSTRUCTORS (continued)

Julian W. Anderson, D.D.S.
Martin Blank, Ph.D. (Physiology)
Harold D. Baurmash, D.D.S.
Marc L. Berg, D.D.S.
Charles L. Berman, D.D.S.
Jack M. Breuer, D.D.S.
Pandelis Camesas, D.D.S.
Victor S. Caronia, D.D.S.
Kenneth C. Deesen, D.D.S.

INSTRUCTORS (continued)

Elizabeth C. Gerst, Ph.D. (Physiology)

Herman Gladstone, M.D. (Anatomy)

Benjamin W. Glick, M.D.

(Anatomy)

Monroe M. Gliedman, D.D.S.

Richard Gliedman, D.D.S.

Ida M. Golomb, D.D.S.

Stanley S. Heller, D.D.S.

H. Curtis Hester, D.D.S.

Norman H. Joondeph, D.D.S.

Mortimer Karmiol, D.D.S.

Edward P. Kesseler, D.D.S.

George Kiriakopoulos, D.D.S.

Seymour Koster, D.D.S.

Philip Kutner, D.D.S.

Henry P. Levy, D.D.S.

(Anatomy)

Evald Linder (Dental Technic)

Julius G. Littman, M.D.

(Anatomy)

Louis J. Loscalzo, D.D.S.

Joseph Luban, D.D.S.

George V. Lyons, D.D.S.

Louis Mandel, D.D.S.

Lawrence Marder, D.D.S.

George A. Minervini, D.D.S. Bernard Nathanson, D.D.S.

Herbert I. Oshrain, D.D.S.

John D. Piro, D.D.S.

Arnold Rosenberg, D.D.S.

Bert B. Schoeneman, D.D.S.

Janice Schreiber, D.D.S.

Murray Schwartz, D.D.S.

Steven Scrivani, D.D.S.

Joseph Serio, D.D.S.

Boaz Shattan, D.D.S.

Alvin L. Solomon, D.D.S. Eugene M. Tedaldi, D.D.S.

Edward E. Teltsch, D.D.S.

Robert F. Walsh, D.D.S.

Bernard H. Wasserman, D.D.S. Issacher Yavelow, D.D.S.

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Russell J. Vanacek, D.D.S.

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CURATOR OF THE MUSEUM Curt Proskauer, D.M.D.

RESEARCH ASSISTANTS

Robert J. Huettner, D.D.S. Solomon L. Katz, D.D.S. Hans H. Neumann, M.D.

^{*} On leave, 1960-1961.

► PRESBYTERIAN HOSPITAL DENTAL SERVICE

DIRECTOR: Gilbert P. Smith

CONSULTANTS: Adolph Berger, Bion R. East, Houghton Holliday, Carl R. Oman,

Joseph Schroff, Albin R. Seidel

DIAGNOSTIC SERVICE

Attending Dental Surgeon: Edward V. Zegarelli

Associate Attending Dental Surgeon: Joseph A. Cuttita

Assistant Attending Dental Surgeons: Jack Budowsky, Austin H. Kutscher, Laszlo

Schwartz

ORAL SURGERY SERVICE

Attending Dental Surgeon: William J. Savoy

Associate Attending Dental Surgeon: Alvin S. Nathan

Assistant Attending Dental Surgeons: Kourken A. Daglian, Boaz Shattan

OPERATIVE DENTISTRY SERVICE

Associate Attending Dental Surgeon: Edward A. Cain, Jr.

Assistant Attending Dental Surgeon: Thomas W. Portway

PATHOLOGICAL SERVICE

Associate Attending Dental Surgeon: Lester R. Cahn

PEDODONTIC SERVICE

Attending Dental Surgeon: Solomon N. Rosenstein

PERIODONTIA SERVICE

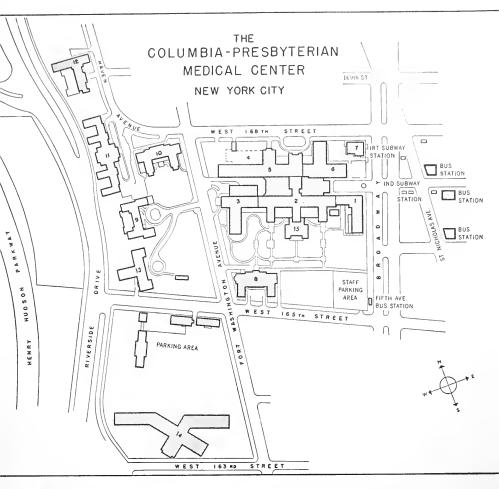
Assistant Attending Dental Surgeon: Frank E. Beube

PROSTHODONTIC SERVICE

Attending Dental Surgeon: Gilbert P. Smith

Assistant Attending Dental Surgeons: Howard A. Arden, Sebastian A. Bruno, Robert E. Herlands, Ennio L. Uccellani



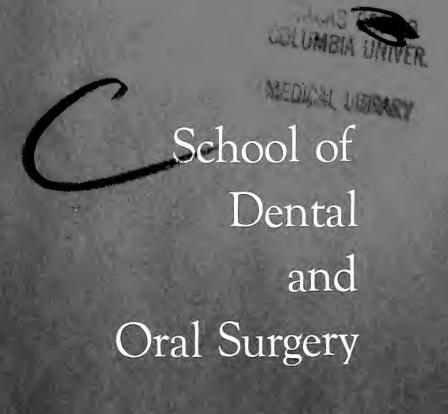


- 1. BABIES HOSPITAL
- 2. PRESBYTERIAN HOSPITAL
 N. Y. ORTHOPAEDIC HOSPITAL
 SLOANE HOSPITAL
 SOUIER UROLOGICAL CLINIC
- 3. HARKNESS PAVILION
- 4. POWER HOUSE
- 5. COLLEGE OF PHYSICIANS AND SURGEONS
- VANDERBILT CLINIC SCHOOL OF DENTAL AND ORAL SURGERY
- 7. N. Y. CITY DEPT. OF HEALTH SCHOOL OF PUBLIC HEALTH AND ADMINISTRATIVE MEDICINE
- 8. INSTITUTE OF OPHTHALMOLOGY
- 9. MAXWELL HALL
- 10. NEUROLOGICAL INSTITUTE
- 11. N. Y. STATE PSYCHIATRIC INSTITUTE
- 12. BARD HALL
- 13. HARKNESS MEMORIAL HALL
- 14. FRANCIS DELAFIELD HOSPITAL, N.Y.C.
- 15. PAULINE A. HARTFORD MEMORIAL CHAPEL



Columbia University Bulletin

SERIES 61 NUMBER 30 JULY 29, 1961



1961-1962

Academic Calendar, 1961-1962

- **Sept 5-6** Tuesday-Wednesday. Registration, including payment of fees. Later registration requires payment of a late fee.
 - 7 Thursday. Freshman Orientation Program.
 - 11 Monday. Classes begin.
- Nov 7 Tuesday. Election Day. Holiday.
 - Thursday. Thanksgiving Day. Holiday.
 - 25 Saturday. First trimester ends.
 - 27 Monday. Second trimester begins.
- Dec 18 Monday, through January 1, 1962, Monday. Christmas Holidays.
- Feb 22 Thursday. Washington's Birthday. Holiday.
 - 24 Saturday. Second trimester ends.
 - Monday. Third trimester begins.
- Mar 1 Thursday. Last day for filing application or renewal of application for all degrees and certificates to be awarded in June. Later filing of application requires payment of a late fee.
- Apr 16 Monday, through April 22, Sunday. Easter Holidays.
- May 1 Tuesday. Last day for filing *late* application for June degrees.
 - 19 Saturday. Third trimester ends.
 - 21-25 Monday-Friday. Final examinations.
 - 30 Wednesday. Memorial Day. Holiday.
- June 6 Tuesday. Award of degrees and certificates.

Columbia University Bulletin · Series 61 · Number 30 · July 29, 1961

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School of
Dental
and
Oral Surgery

The Faculty of Dental and Oral Surgery

Grayson Kirk, Ph.D., LL.D. President of the University

John A. Krout, Ph.D., L.H.D. Vice President of the University

Jacques Barzun, Ph.D. Dean of Faculties and Provost of the University

H. Houston Merritt, M.D. Vice President in Charge of Medical Affairs

Gilbert P. Smith, D.D.S. Dean

Howard A. Arden, D.D.S. Associate Professor of Dentistry Frank E. Beube, L.D.S., D.D.S. Clinical Professor of Dentistry Edward A. Cain, Jr., D.D.S. Professor of Dentistry Wilfred M. Copenhaver, Ph.D. Professor of Anatomy Joseph A. Cuttita, D.D.S. Associate Professor of Dentistry Nicholas A. Di Salvo, D.D.S., Ph.D. Professor of Dentistry Rudolph H. Friedrich, D.D.S. Professor of Dentistry Harry A. Galton, D.D.S. Clinical Professor of Dentistry Magnus I. Gregersen, Ph.D. Dalton Professor of Physiology Robert E. Herlands, D.D.S. Professor of Dentistry John J. Lucca, D.D.S. Associate Professor of Dentistry Donald G. McKay, M.D. Delafield Professor of Pathology David Rittenberg, Ph.D. Professor of Biochemistry Harry M. Rose, M.D. John E. Borne Professor of Microbiology Solomon N. Rosenstein, D.D.S. Professor of Dentistry William J. Savoy, D.D.S. Clinical Professor of Dentistry Laszlo Schwartz, D.D.S. Clinical Professor of Dentistry Frances A. Stoll, Ed.D. Professor of Dental Hygiene Harry B. van Dyke, Ph.D., M.D. Hosack Professor of Pharmacology

Edward V. Zegarelli, D.D.S. Edwin S. Robinson Professor of Dentistry

Objectives of the School

Columbia University founded the School of Dental and Oral Surgery in 1916 with the conviction that dentistry is an integral part of the health sciences and that dental education is a true university discipline. These beliefs have prevailed through the School's history and are presently reaffirmed. Many departments of the University contribute to and collaborate in the education of the dental student, thereby assuring him a broad foundation for sound professional development. The guiding educational policy of Columbia University is a constant pursuit of excellence. The primary goal of the School of Dental and Oral Surgery is the preparation of dentists who will fulfill their obligations to the individual, to society, and to the profession.

The curriculum reflects the realization that adequate preparation for dentistry demands both an understanding of biological principles and the development of clinical skills, and that each is dependent upon the other if optimal dental service is to be assured. The correlation of biological knowledge with clinical practice is reinforced throughout the program by both basic-science and clinical instruction. Emphasis is placed upon the close relationship between systemic and oral health and disease, on systemic aberrations that affect the oral structures, on diseases of the mouth which may affect other organ systems, and upon dental health as an essential to total health.

Clinical training, which is broad in scope and of great importance, is designed to produce competence in the recognition of oral disease and disorder, to develop skill in the planning and execution of treatment, to establish the concept of maintaining the oral structures in optimal health, and to stress the essential role of prevention in the control of oral disease.

Although learning plays a vital role in the student's life, his future development and attainment can be assured most effectively by fostering a spirit of inquiry. Accordingly, there is constant application of the scientific method, and both undergraduate and postgraduate students are encouraged to participate in research.

Because the child population is rapidly increasing, knowledge of the processes of human growth and development and of prevention of disease and abnormality must be amplified. In medicine, prevention of disease has resulted in extensive reduction in infant and child mortality and in a marked increase in the life span of the individual. In dentistry, prevention of dental and oral disease and disorder must be effected in childhood to eliminate dental mortality and enable our youth to attain adulthood with complete, healthy dentitions and socially acceptable speech and expression. The increased life span presents many new physiological and pathological problems which are peculiar to the aged and are open to investigation. Programs in graduate education and research are essential if we are to meet these challenges to dentistry. The School of Dental and Oral Surgery regards high standards in both graduate education and research as prime objectives.

Foresight on the part of the founders of the School of Dental and Oral Surgery provided for the education of auxiliary personnel to augment dental health services.

The Courses for Dental Hygienists was established in the same year that the School became part of the University. Further exploration is planned in the use of auxiliary personnel to increase efficiency and to provide additional services for the growing population.

Columbia University has realized that to accomplish these objectives requires the selection of students with superior abilities and academic qualifications, excellent teaching, and constant pursuit of knowledge through an active and diversified research program. Conscious of these needs, the School of Dental and Oral Surgery has selected its students with care and has maintained classes of small size with a favorable ratio of students to staff. This permits individual instruction and an inspiring relationship between student and teacher. The School has, through the years, enjoyed a staff of distinguished teachers who have demonstrated accomplishment in education, research, and professional leadership. Thus, a sound background and training enable the Columbia graduate to meet the oral health requirements of the nation, to interpret the needs of the future, and to assume leadership in the various areas of professional and community activities.

► PROGRAM OF STUDY

The Columbia program in dentistry requires four academic years to complete and leads to the degree of Doctor of Dental Surgery. The aim of the curriculum is to enable the student to acquire a knowledge of the fundamental sciences in relation to dentistry and of the techniques of solving dental problems. The first two years are devoted to a study of the basic sciences, particularly anatomy, biochemistry, microbiology, pathology, and physiology, along with the fundamentals of operative and prosthetic dentistry, oral surgery, periodontology, and psychiatry. The student thereby prepares himself for an understanding of the problems to be encountered in his later clinical work. The third and fourth academic years are devoted to mastering the methods of diagnosis and treatment of patients and acquiring a knowledge of disease patterns and the arts and skill required in preventing, curing, or controlling them.

Throughout the entire course an effort is made to interrelate the different phases of dental learning by means of "correlative" and "combined" clinics in which the various departments and divisions cooperate in the discussion and demonstration of the same and related problems and thus treat the study of dentistry as a unit rather than a series of isolated branches of learning. At the same time an attempt is made to individualize instruction and to place responsibility as far as practicable upon the student for his own training. This is accomplished by the division of classes into small sections, by conferences, and by the comprehensive case method of instruction.

The student's voluntary participation in research projects of his own choosing and in programs under the guidance of the faculty is earnestly encouraged. Members of the William Jarvie Society for Dental Research, the undergraduate research and honor society, undertake individual and team projects under the direction of members of the faculty. Lectures on the principles and practice of research are provided for the membership. In addition, students assist in the execution of studies being pursued by faculty members. A limited number of student research fellow-

ships are available for summer work under the direction of the staff. The scope of student research includes critical reviews of the literature, clinical studies in the techniques of the various disciplines of dentistry, and the evaluation of newer therapeutic agents and dental materials. Work in the basic sciences is encouraged.

The administrative offices and the clinical and research facilities of the School of Dental and Oral Surgery occupy three floors of the Vanderbilt Clinic wing of the Columbia-Presbyterian Medical Center, one of the great institutions of its kind in the East.

THE DENTAL CLINIC

The School benefits in many ways by its association with the Medical Center. One of the functions of its clinic is the dental care of patients in the Center's hospitals. Dental students are given a unique opportunity to gain experience in the diagnosis and care of those cases where a relationship exists between oral and general systemic diseases. The student also learns at first hand the problems of providing dental care for the hospitalized patient. The wards and outpatient departments of the Center give close contact and association with all branches of the health services.

THE LIBRARY

The Medical Library occupies parts of the three lower floors in the College of Physicians and Surgeons. It provides current literature, both books and journals, for faculty and students, and it aids in research through its own collection of current and historical works and through its unique bibliographic service.

▶ POSTGRADUATE TRAINING

The School of Dental and Oral Surgery arranges courses in the various divisions of dentistry to meet the needs of groups of practitioners. In 1961–1962 short refresher courses will be offered in various subjects. Admission requirements include graduation from an approved dental school and licensure to practice dentistry within the United States or a foreign country. There is no degree or certificate offered for these courses.

The School is also authorized to grant certificates of training in special branches of dentistry. Study for the certificate of training includes special work in the clinical and basic science branches of dentistry approved by the Dean. At present, a sixteenmonth course is offered to qualify graduates in dentistry who wish to prepare for specialization in orthodontics. Advanced courses leading to certificates of training are also offered in oral diagnosis and roentgenology, oral surgery, pedodontics, periodontology, and prosthodontics.

For further information see the bulletin of Postgraduate Courses for Dentists, which may be obtained from the Admissions Office, School of Dental and Oral Surgery.

GRADUATE COURSES IN THE BASIC SCIENCES

A limited number of fellowships are available to graduates of dental schools acceptable to Columbia University. These fellowships offer opportunity for study in

the following basic science departments of the University: anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology. For further information regarding qualifications and stipend, address the Dean, School of Dental and Oral Surgery.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

Graduation from accredited dental schools under the present curriculum of four academic years preceded by three acceptable predental college years is considered by the Graduate Faculties of Columbia University as meeting the general requirement for admission. There are additional admission requirements in certain departments. A student who is accepted by the Graduate Faculties as a candidate for the degree of Doctor of Philosophy and who holds the Doctor of Dental Surgery degree from Columbia University may, with the consent of the Dean, offer the work done for the professional degree in lieu of thirty points toward the fulfillment of the residence requirement for the degree. For further information see the bulletin of the Graduate Faculties, which may be obtained by writing to the Office of University Admissions, 322 University Hall, Columbia University, New York 27, N.Y.

PUBLIC HEALTH FOR DENTISTS

A one-year course leading to a Master of Public Health degree is offered by the School of Public Health. The course is open to graduate dentists. For further information regarding course content, registration, and fees, apply to the Director, School of Public Health and Administrative Medicine, 600 West 168th Street, New York 32, N.Y.

► COURSES FOR DENTAL HYGIENISTS

Columbia offers two programs of study in dental hygiene. The program for the Bachelor of Science degree includes a minor in public health; it also offers the subjects required by New York State for a permanent dental hygiene teacher's license. The purpose of the program is to give students the wide range of professionl experience available in a large medical center, to perfect dental health techniques, and to provide these educational experiences in an ethical environment. Advanced education leading to the Master of Science degree is provided for those who wish to teach dental hygiene or to fill administrative or supervisory posts in other university schools for dental hygienists. The programs are open only to women.

For a special bulletin describing the programs of study address the Director, Courses for Dental Hygienists, 630 West 168th Street, New York 32, N.Y.

Courses of Instruction

The University reserves the right to withdraw or modify the courses of instruction or to change the instructors at any time.

ANATOMY

Anatomy 115. Oral microscopic anatomy and embryology

Professor Applebaum and staff. First year.

Lectures and laboratory work on growth and development of the jaws and face; microscopic anatomy of the teeth and surrounding and related tissues of the oral cavity. Application of this knowledge to technical dentistry.

Anatomy 150. Microscopic anatomy

Professor Copenhaver and staff. First year.

Lectures, conferences, and laboratory.

This course is the same as Anatomy 101F in the Medical School.

Anatomy 151. Gross anatomy

Professors Moss and Rogers, and staff. First year.

Regional dissections of the complete body are augmented by lectures stressing functional interpretations. The course is oriented to the basic principles of human biology, with emphasis on pertinent anthropological and clinical topics.

Anatomy 152. Embryology

Professor Copenhaver and staff. First year.

Lectures and demonstrations correlating developmental anatomy with gross anatomy and with microscopic anatomy.

Anatomy 153. Neuroanatomy

Professors Carpenter and Noback, and assistants. First year.

Lectures and demonstrations on the gross anatomy, structure, and functions of the central nervous system. This course is equivalent to Anatomy 106S in the Medical School.

Anatomy 171. Statistics and genetics

Interdepartmental course. Second year.

Lectures and demonstrations.

Anatomy 252. Functional anatomy of the head and neck

Professors Moss and Rankow. Third year.

A concise review of the functional interrelationships in this region and their dynamic significance. Pertinent clinical topics are analyzed from this viewpoint.

BIOCHEMISTRY

Biochemistry 150. Principles of biochemistry

Professors Eisenberg and Gillespie. First year.

A study of the chemical constitution of natural products and their metabolism to yield cellular constituents and the energy requirements of the mammalian cell.

MEDICINE

Medicine and Casualty Care 278 and 279. General survey of medicine; casualty care in civil defense

Professor Rankow and members of the Presbyterian Hospital staff. Third and fourth years.

The cardinal manifestations of disease are reviewed from the differential diagnostic point of view. The disorders of the various organ systems as well as those resulting from endocrine and metabolic dysfunction are studied. Emergency measures are presented for management of the casualties in civil defense.

MICROBIOLOGY

Microbiology 151. General medical microbiology and immunology

Professor Ellison. Second year.

Laboratory and conferences.

Microbiology 152. Principles of microbiology, immunology, and epidemiology

Professor Ellison. Second year.

This course is similar to *Microbiology 105F* in the Medical School. Lectures on oral microbiology are substituted for several of those of the medical series.

ORTHODONTICS

Orthodontics 241. Principles of orthodontics

Professor Di Salvo and staff. Third year.

Lectures and laboratory. Orthodontic fundamentals with special emphasis on prevention of malocclusion by the early recognition and correction of the predisposing factors. Laboratory time is devoted to the designing and construction of fixed and removable appliances used as space maintainers. In addition, simple appliances used in tooth guidance procedures, which are considered to be within the province of the general practitioners of dentistry, are constructed.

Orthodontics 242. Orthodontic clinic

Professor Di Salvo and staff. Fourth year.

Students obtain clinical experience in the use of appliances constructed in the laboratory. They treat patients with orthodontic problems which require either preventive measures or minor tooth movement.

PATHOLOGY

Pathology 150. General and special pathology

Professor McKay and staff. Second year.

Lectures, demonstrations, and laboratory work designed to give the student a comprehensive understanding of the mechanisms of disease. Special emphasis is placed on general pathology and on disorders of the respiratory, cardiovascular, and osseous systems.

Pathology 246. Oral pathology

Professor Cahn and staff. Second year.

Lectures, demonstrations, conferences, and laboratory work on diseases of the jaws, teeth, and soft tissues about the oral cavity.

Pathology 247. Oral pathology seminar

Professor Cahn. Fourth year. Elective.

Conferences on the clinical application of oral pathology.

PEDODONTICS

Pedodontics 201. Preventive dentistry

Professor Rosenstein. Fourth year.

Lectures on the principles of prevention of dental and oral disease and disorders in children: dental caries, the common oral soft-tissue lesions, disorders of occlusion in the developing dentitions, and elimination of unfavorable habits involving the mouth. Constitutional and systemic factors (including nutrition) are included, as well as local oral factors. In each of these areas specific recommendations are made for clinical application of positive preventive measures. Pertinent literature is assigned and reviewed.

Pedodontics 202. Theory and practice of pedodontics

Professor Rosenstein. Fourth year.

Lectures and conferences on the factors involved in basic treatment planning for children and requisite background knowledge: anatomical details of deciduous teeth, clinical aspects of the various stages of dental development, child evaluation and management, purposes and essentials of pedodontic history taking, home care, special operative procedures for conservation of children's teeth, management of traumatized teeth, and special considerations in dental care for children with handicapping conditions.

Pedodontics 203. Pedodontics technique

Professor Rosenstein and staff. Fourth year.

Demonstration and technique exercises in special operative procedures for compound-cavity preparation and filling, and full-crown coverage for deciduous teeth on technique models using newer types of cutting instruments.

Pedodontics 204. Pedodontics clinic

Professor Rosenstein and staff. Fourth year.

Clinical practice in management of the child dental patient and application of the principles and procedures presented in the lecture courses: history taking, prophylaxis, and special operative procedures for prevention of premature loss of children's teeth. Application of knowledge of dental development and preventive dentistry is emphasized in evaluation of the child dental patient and in treatment planning.

PERIODONTOLOGY

Periodontology 151. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Second year.

Lectures and seminars in the diagnosis, etiology and treatment of periodontal diseases. Clinical practice in periodontal examination, prescribing dental prophylaxis, subgingival curettage, and oral hygiene,

Periodontology 251. Periodontia lectures, seminars, and clinic

Professor Beube and staff. Third year.

Lectures and seminars on periodontal surgery, occlusal traumatism, selective tooth grinding, and temporary splinting. Clinical practice in subgingival curettage, selective tooth grinding, wire ligation, and standard periodontal surgical techniques.

Periodontology 252. Periodontia lectures and seminars

Professor Beube and staff. Fourth year.

Lectures and seminars on the history of treatment methods, special problems in periodontal surgery, fixed splinting, periodontal histology and histopathology, and treatment-planning.

Periodontology 253. Periodontia clinic

Professor Beube and staff. Fourth year.

Continuation of Periodontology 251 and advanced periodontal surgical techniques.

PHARMACOLOGY

Pharmacology 150. Introduction to pharmacology

The staff. Second year.

By means of the lectures in this course, the student is introduced to a wide variety of drugs. The effects of many of these drugs on man and lower animals are demonstrated in the laboratory. Emphasis is placed upon general pharmacological principles to assist the student in the rational use of drugs and in the evaluation of new remedies as they may be introduced.

PHYSIOLOGY

Physiology 150. Mammalian physiology

Professor Nocenti and staff. First year.

Lectures, conferences, demonstrations, and laboratory. The function of the various organ systems of the mammalian body and their interrelations are studied.

PSYCHIATRY

Psychiatry 150. Psychiatry for the dentist

Professor Cattell. Third year.

Lectures on mental hygiene and general principles involved in the field of psychiatry. The development and organization of the personality. The effects of emotional problems, in the development of psychological symptoms, and psychosomatic disorders. General considerations in psychotherapy.

PUBLIC HEALTH

Public Health 222. Principles of public health

Professor Bushel and staff. Fourth year.

Survey course in the theory and practice of general public health with more detailed discussion of dental public health topics. Included are several background sessions on epidemiology, preventive medicine, and statistics as well as presentations of public health programs at the federal, state, and local levels. Dental public health sessions feature existing programs, dental prepayment, community dental surveys, the dentist and his professional society, and dental health education resources.

RESTORATIVE DENTISTRY

Restorative Dentistry 101. Oral anatomy

Professor Arden and staff. First year.

Lectures on the gross anatomy of the teeth and of the related tissues. Laboratory procedures in the reproduction of individual teeth in wax, the setting up of teeth in occlusion, the restoration of the anatomy of carious teeth in wax, and the macroscopic study of tooth morphology.

Dental Materials 125 and 126. Physical properties of dental materials

Professor Avers. First and second years.

Lectures and demonstrations relating the action of the restorative and accessory dental materials with the oral tissues in function.

Operative Dentistry 130 and 131. Elements of operative dentistry

Professor Cain and staff. First and second years.

Lectures on the fundamentals of operative dentistry, including the etiology of dental caries and the biological approach to the technical procedures in the filling of teeth.

Operative Dentistry 233. Operative clinical practice

Professor Sherman and staff. Third year.

Introduction to clinical practice. Lectures on the application of operative fundamentals to clinical practice. Clinical practice and demonstrations.

Operative Dentistry 234. Advanced clinical practice

Professor Cain and staff. Fourth year.

A continuation in lectures and clinic of Operative Dentistry 233 with the consideration of special problems in operative practice, including endodontia.

Prosthetics 104 and 105. Crown and fixed partial denture lectures and technique

Professor Arden and staff. First and second years.

Lectures on the technical procedures in crown and fixed partial dentures, with practical application, and the construction of fixed partial dentures and crowns on technique models.

Prosthetics 157. Prosthetic lectures and technique

Professor Arden and staff. Second year.

Lectures and technical procedures in complete and removable partial denture construction.

Prosthetics 205. Crown and fixed partial denture lectures

Professor Herlands. Third year.

Lectures on the clinical procedures in crown and fixed partial dentures.

Prosthetics 206. Crown and fixed partial denture clinic

Professor Herlands and staff. Third year.

Clinical construction of elementary crown and fixed partial dentures.

Prosthetics 210. Crown and fixed partial denture lectures

Professor Herlands. Fourth year.

Lectures and conferences on various types of fixed partial dentures.

Prosthetics 211. Crown and fixed partial denture clinic

Professors Smith and Herlands, and staff. Fourth year.

Clinical construction of crown and fixed partial dentures.

Prosthetics 212. Applied occlusal dynamics

Professor Cohn. Third year.

Lectures, demonstrations, and technique stressing the relationship of occlusal deformities, both natural and acquired, to oral physiology.

Prosthetics 260. Prosthetic lectures

Professors Lucca and Hindels. Third year.

Examination, classification, application of anatomical considerations, and clinical procedure in complete and removable partial denture construction.

Prosthetics 261. Prosthetic clinic

Professor Lucca and staff. Third year.

Clinical demonstrations and instruction in the construction of complete dentures.

Prosthetics 263. Prosthetic clinic

Professors Smith and Lucca, and staff. Fourth year.

Clinical construction of complete and removable partial dentures.

Prosthetics 264. Prosthetic lectures

Professor Lucca. Fourth year.

A series of lectures on clinical and biological considerations in prosthodontic diagnosis, design, and construction.

Prosthetics 265. Surgical prosthesis

Professor Bruno. Fourth year.

Lectures and technical procedures in maxillofacial and surgical prosthesis.

STOMATOLOGY

Diagnosis 212. Diagnosis lectures and clinic

Professors Zegarelli, Cuttita, and Budowsky. Third year.

Lectures on methods of diagnosis, pulp symptomatology, radiographic interpretation, anomalies, and diseases of the mouth and jaws; clinical practice in diagnostic examination and history-taking.

Diagnosis 213. Diagnosis clinic

Diagnosis staff. Fourth year.

Clinical practice in diagnostic procedures and techniques, comprehensive diagnosis including treatmentplanning, and clinical and laboratory diagnosis of diseases of the mouth and jaws.

Diagnosis 214. Diagnosis lectures

Professor Zegarelli. Fourth year.

Lectures and discussions on the diseases of the maxilla and mandible and tumors of the mouth; demonstrations of diagnostic techniques,

Diagnosis 215. Diagnosis lectures

Professor Zegarelli and staff. Fourth year.

Lectures and discussions on focal infection, psychosomatics in dentistry, and hemorrhagic diseases of the mouth.

Radiology 267. Radiology lectures and clinic

Professor Budowsky and staff. Third year.

Lectures and discussions on history, physics, and electronics of radiology; studies on radiobiology, radiotherapy, radiation hazards, and protections; clinical practice in intra- and extraoral radiography; demonstrations of temporomandibular joint and laminography techniques.

Therapeutics 286.

Professor Kutscher. Third year.

Lectures, conferences, and clinical experience in the application of the principles of pharmacotherapeutics to general practice. The course is specifically integrated with the lectures of *Diagnosis 212* in regard to indications for therapy, choice of drugs, modes of administration, and side reactions.

SURGERY

Surgery 168A. Local anesthesia

Professor Friedrich and staff. Second year.

Lectures and seminars on the history of anesthesia and pain control in dentistry, the nature and action of local anesthetics, the evaluation of the patient in the selection of drugs, and the anatomy related to and the techniques required in the proper application of local anesthesia to dental practice.

Surgery 168B. Basic exodontia

Professor Baurmash. Second year.

Lectures and demonstrations covering the evaluation, treatment plan, and preparation of the patient for the uncomplicated removal of teeth. The basic principles of tooth movement in exodontia, the related anatomy of the oral cavity, and the procedures for assurance of asepsis.

Surgery 270. Dento-alveolar surgery

Professor Friedrich. Third year.

Lectures, seminars, and clinical practice in the evaluation of the patient, the evaluation of diagnostic data, and the development of the surgical decision; the principles of flap design and the surgical management of the hard and soft tissues of the mouth; the surgical removal of teeth and the surgical procedures related to orthodontics, prosthodontics, endodontics, periodontics, and oral diagnosis.

Surgery 271. Hard- and soft-tissue trauma and dental infections

Professor Loscalzo. Fourth year.

An analysis of the process of dental infection: the influence of anatomic relations in the developmental pattern of infection; the surgical anatomy essential to its proper medical and surgical management; the recognition and diagnosis of fractures of the mandible and maxilla and of related facial fractures; the management of fractures involving occlusion; and clinical practice in oral surgical problems.

Surgery 272. Surgery of associated oral tissues and structures: tumors, cysts, salivary glands, and maxillary sinus

Professor Mandel. Fourth year.

Lectures and seminars on the large segment of surgical problems not associated with exodontia; the differential diagnosis; the development of the surgical decision; the medical and surgical management of problems of the maxillary sinus, benign tumors, salivary glands, and cysts. Attention is also given to the application of the basic sciences in the proper understanding and management of these problems.

Surgery 273. General anesthesia in dental practice

Professor Fierstein and staff. Fourth year.

Lectures and demonstrations on the history of anesthesia in dentistry, pharmacological and physiological pain and patient control in modern dental practice, the management of emergencies in the dental office (from syncope to coronary arrest), and the clinical administration of drugs.

Surgery 274. The dental team in the management of oral, facial, and speech defects Professor Friedrich and guest lecturers. Fourth year.

Lectures and demonstrations on the necessity for free but coordinated interplay among dental specialties in the rehabilitation of the birth anomalies of the oral cavity, post-neoplastic surgical and post-traumatic conditions, and the biological and psychological problems involved in the treatment planning for their therapy. In addition, guest lecturers from medicine, surgery, and speech therapy present the total management of these problems.

Surgery 275. Seminar and comprehensive examination in oral surgery

Professor Friedrich and staff. Fourth year.

Seminar sessions in which students present the essentials of specific problems in oral surgery as a basis for class discussion. The sessions are attended by several members of the staff who use this opportunity to measure the student's understanding and knowledge of his place in the total complex of surgical care for the patient.

THEORY AND PRACTICE OF DENTISTRY

Theory and Practice 280. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Third year.

Lectures covering opportunities in the field of dentistry, selecting a location, planning and equipping an office; development of habits leading to personal health and professional success. Introduction to dental ethics and the law relating to dental practice. Handling patients under clinic conditions, and dental records.

Theory and Practice 281. Dental ethics, jurisprudence, and practice administration

Professor Hunt. Fourth year.

Lectures and seminars covering the codes of ethics, intraprofessional relations, areas of legal liability, malpractice, contracts, establishing fees, office procedures, psychology of handling patients and practice-building.

Theory and Practice 283. Clinical oral physiology

Professor Schwartz and staff. Fourth year.

The physiology of the masticatory system and its relation to dental practice is studied through lectures, demonstrations, and conferences.

Theory and Practice 285. Comprehensive case

The staff. Fourth year.

Each student is assigned a case for which he performs all the dental services: taking of x-ray negatives, treatment-planning, surgery, and reparative and restorative procedures. The services are carried out in the various clinical divisions. The oral examination accompanying the inspection of the completed case aims to correlate the teaching of the entire course.

Theory and Practice 287. History of dentistry

Professor Schwartz. First year.

This course orients the student to the whole of dentistry through the study of its history. The origins, growth, and trends in the development of the scientific and technical principles of modern dentistry are considered in lectures and conferences. The technique of utilizing the literature of dentistry is described.

Summary of the Program

The letters following the course numbers indicate the trimester in which the course is given: F, first; S, second; T, third.

► FOR THE CLASSES OF 1962 AND 1963

THIRD YEAR (CLASS OF 1963)	Hours		
	Class	Lab/Clin	Total
Anatomy 252T	11		11
Diagnosis 212FST	33	30	63
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	22	171	193
Orthodontics 241F	22	50	72
Pathology 246F	11	22	33
Periodontology 251ST	11	91	102
Pharmacology 150FS	55	33	88
Prosthetics 205S	11		11
Prosthetics 206FST		168	168
Prosthetics 212T	22		22
Prosthetics 260FT and 261FST	22	168	190
Psychiatry 150S	11		11
Radiology 267FS	11	14	25
Surgery 270BFST	11	10	21
Theory and Practice 280T	11		11
Therapeutics 286T	22		22
			1,087
FOURTH YEAR (CLASSES OF 196	2 AND 1963)		
Diagnosis 213FST		30	30
Diagnosis 214 and 215FT	33		33
Medicine and Casualty Care 279F	9		9
Operative Dentistry 234FST	22	336	358
Orthodontics 242FST		14	14
Pedodontics 202FST	22	91	113
Periodontology 252FS	22		22
Periodontology 253F		30	30
Prosthetics 210S	11		11
Prosthetics 211FST		129	129

1,100

	Hours			
	Class	Lab/Clin	Total	
Prosthetics 264T	11		11	
Prosthetics 261 and 263FST		159	159	
Prosthetics 265T	11	19	30	
Public Health 222ST	22		22	
Surgery 272FST	33	52	85	
Surgery 274F	11		11	
Theory and Practice 281FS	22		22	
Theory and Practice 283F	11		11	

► FOR THE CLASSES OF 1964 AND 1965

Theory and Practice 285FST

FIRST YEAR

Anatomy 101ST		123	123
Anatomy 115ST	24	48	72
Anatomy 150FS	42	126	168
Anatomy 151FS	50	223	273
Anatomy 152F	22		22
Anatomy 153S	22	44	66
Biochemistry 150ST	57	114	171
Operative Dentistry 130T	11	22	33
Physiology 150ST	57	130	187
Theory and Practice 287T	11		11
			1,126
SECOND YEAR			
Dental Materials 125 and 126FT		55	55
Diagnosis 100T	11		11

Dental Materials 125 and 126FT		55	55
Diagnosis 100T	11		11
Statistics and Genetics 171FS	42		42
Microbiology 151 and 152F	44	88	132
Operative Dentistry 131FST	33	110	143
Pathology 150FST	55	121	176
Pathology 246T	22	44	66
Periodontology 151T		33	33
Pharmacology 150FS	55	33	88
Prosthetics 104, 105, and 205FS	20	157	177
Prosthetics 157ST	13	177	190
Radiology 267T	11	15	26
Surgery 168S	11		11
Surgery 270AT	11		11
			1,161

THIRD YEAR	Hours		
	Class	Lab/Clin	Total
Anatomy 252T	11		11
Diagnosis 212FST	33	30	63
Medicine and Casualty Care 278T	22	22	44
Operative Dentistry 233FST	22	245	267
Orthodontics 241F	22	50	72
Periodontology 251ST	11	61	72
Prosthetics 205S and 206FST	11	168	179
Prosthetics 212T	22		22
Prosthetics 260, 261, and 263FST	22	168	190
Psychiatry 150S	11		11
Surgery 270BFST	11	10	21
Theory and Practice 280T	11		11
Therapeutics 286T	22		22
Therapeuties 2001			985
			703
FOURTH YEAR			
		20	30
Diagnosis 213FST	22	30	33
Diagnosis 214 and 215FT	33		9
Medicine and Casualty Care 279F	9	226	358
Operative Dentistry 234FST	22	336	
Orthodontics 242FST		14	14
Pedodontics 202FST	22	91	113
Periodontology 252FS	22		22
Periodontology 253F		30	30
Prosthetics 210S	11		11
Prosthetics 211FST		129	129
Prosthetics 264T	11		11
Prosthetics 261 and 263FST		159	159
Prosthetics 265T	11	19	30
Public Health 222ST	22		22
Surgery 272FST	33	52	85
Surgery 274F	11		11
Theory and Practice 281FS	22		22
Theory and Practice 283F	11		11
Theory and Practice 285FST			
			1,100

Admission, Registration and Expenses

Candidates should apply during the academic year preceding that for which they seek admission, on application blanks obtained from the Committee on Admissions, School of Dental and Oral Surgery, 630 West 168th Street, New York 32, N.Y. Every application must be accompanied by a check or money order for \$15, payable to Columbia University, to cover the cost of processing the application. This fee is not returnable and is not credited toward tuition.

The State Department of Education has special requirements with which students who are not citizens of the country must comply. Foreign students who wish to apply should communicate with the Dean.

Required preparation: three full years at an acceptable college of arts and sciences, including the following courses required by the State Board of Regents (6 points of each). English composition and literature, physics, biology, inorganic chemistry, and organic chemistry.

Recommended preparation: additional courses in chemistry, advanced courses in biology, courses in mathematics, foreign languages, sociology, history, and the fine and industrial arts.

It is not necessary to complete the academic requirements before applying, but all requirements must be completed before matriculation. The admission of a student depends primarily on his preparation and intellectual capacity, but it also depends upon judgments of his character and health.

DENTAL APTITUDE TESTS

All applicants must take the Dental Aptitude Tests, which are conducted by the Council on Dental Education at various testing centers throughout the United States and Canada. For further information apply directly to the Division of Aptitude Testing, Council on Dental Education of the American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

ACCEPTANCE FEE

Within one month after he receives notice of his acceptance, an applicant must notify the Committee on Admissions that he intends to enroll and must send a check or money order for \$200 made payable to Columbia University. If he registers for the term to which he has been admitted, the fee will be credited toward his tuition; if he does not register, the fee will not be refunded.

COMBINED COURSES

With Barnard College. Under the "professional option" plan, students from Barnard College may receive the Bachelor of Arts degree from Barnard after the completion of three years of undergraduate work and the first year in the School of Dental and Oral Surgery. To be eligible for this privilege, before entering the School the student must have completed at Barnard 90 points of academic work (including all specific requirements), a major of 28 points, and the major examination or thesis.

With the School of General Studies. Students from the School of General Studies may exercise the professional option after the completion of 94 points (including all courses prescribed for the Bachelor of Science degree), not less than 64 of which must have been taken at Columbia University.

▶ REGISTRATION

Before attending classes, students must register in person at the Office of the Registrar on September 5–6, 1961. Registration consists of filling out forms required for University records and paying the fees. Late registration requires the approval of the Dean of the School and the payment of a late fee (see below).

REGULATIONS

Each person whose registration has been completed will be considered a student of the University during the term for which he is registered unless his connection with the University is officially severed by withdrawal or otherwise. No student registered in any school or college of the University shall at the same time be registered in any other school or college, either of Columbia University or of any other institution, without the specific authorization of the dean or director of the school or college of the University in which he is first registered.

The privileges of the University are not available to any student until he has completed his registration. Since, under the University statutes, payment of fees is part of registration, no student's registration is complete until his fees have been paid. No student is permitted to attend any University course for which he is not officially registered unless he has been granted auditing privileges. No student may register after the stated period unless he obtains the written consent of the proper dean or director.

ATTENDANCE AND LENGTH OF RESIDENCE

No degree will be granted to a student who has not registered for and attended at the University courses of instruction equivalent to at least one academic year of full-time work.

Students are held accountable for absences incurred owing to late enrollment. Any student whose religious duties conflict at any time with academic requirements should apply to his dean or director for an equitable solution.

A student in good standing may, for reasons of weight, be granted a leave of absence by the dean or director of the division of the University in which he is registered.

ACADEMIC DISCIPLINE

The continuance of each student upon the rolls of the University, the receipt by him of academic credits, his graduation, and the conferring of any degree or the granting of any certificate are strictly subject to the disciplinary powers of the University, which is free to cancel his registration at any time on any grounds which it deems proper. The disciplinary authority of the University is vested in the President and, subject to his reserved powers, in the dean of each faculty and the director of the work of each administrative board.

► FEES

Tuition, the comprehensive fee, and the student health service fee are payable each term in advance and as part of registration. If these fees are paid after the last day of registration (see the Academic Calendar), they will not be reduced, and a late fee of \$6.00 will be imposed.

The following fees are prescribed by statute for the full program for one year for a candidate for the D.D.S. degree and are subject to change at any time at the discretion of the Trustees. Fees for a partial program are assessed by the Registrar as provided by the University statutes.

1,350.00
50.00

APPLICATION FEES AND LATE FEES

Application for admission	\$15.00
Application for each special examination	10.00
For renewal of application for a degree	1.00
For late registration	6.00
For late application, or late renewal of application, for a degree	5.00

FEES FOR REPEATED COURSES

A student who is required to repeat the work for any one year must pay the full tuition.

WITHDRAWAL AND ADJUSTMENT OF FEES

A student who decides to withdraw from the University must notify the Registrar in writing at once. If he is under twenty-one years of age, his parent or guardian must first give consent in writing to the Registrar. He will be given an honorable

discharge provided he is in good academic standing and not subject to discipline. At the Registrar's discretion and according to University policy, he will also be given a proportionate rebate of the tuition fees that he has paid. The rebate will be reckoned from the day on which the Registrar receives the student's written notification of withdrawal. The comprehensive fee, the student health service fee, application fees, late fees, and special fees are not refundable.

STUDENT HEALTH SERVICE FEE

The student health service fee will be used to pay the annual premium of the Associated Hospital Service of New York for hospital insurance and to pay part of the cost of the Student Health Service. Students who already have hospital insurance will not be charged the cost of the premium.

Daily office hours are held by the Student Health Service, Room 2–220, Vanderbilt Clinic. Members of the health service are available to attend ill students if they live near the Medical Center. Students requiring hospitalization will be taken care of either in the wards of the Medical Center or elsewhere under the terms of an insurance policy of the Associated Hospital Service of New York.

RENEWAL OF APPLICATION FOR THE D.D.S. DEGREE

An application for the D.D.S. degree terminates at the next regular time for the issuance of diplomas subsequent to the date of filing, but it may be renewed for a fee of \$1.00 each time that the candidate chooses to come up for consideration.

▶ ESTIMATED EXPENSES

The approximate cost of attending the School for an academic year of nine months is as follows:

	Average	Minimum
Tuition and fees for a full program	\$1,500.00	\$1,500.00
Room in one of the dormitories	400.00	250.00
Board in a University dining hall	550.00	510.00

In addition each student should budget for such items as clothing, laundry and dry cleaning, travel, dues to organizations, amusements, and sundries. Those who live at home probably spend from \$100 to \$150 for lunches during the year.

BOOKS AND EQUIPMENT

Books. The approximate cost of books will be: in the first year, \$150; in the second year, \$100; in the third year, \$200; in the fourth year, \$45. Book lists are posted for each class during registration week. Books may be purchased from the Medical Center Bookstore on the second floor of the College of Physicians and Surgeons. The store is maintained expressly for the convenience of the students and staff of the Medical Center schools and hospitals.

Instruments and supplies. Each student must buy, from the University, the original package outfit of instruments specified in the official instrument list. Unauthorized or incomplete equipment will not be accepted by the instructors. All technique material and regular supplies must be purchased from the University upon order from the instructor. Students may not buy more than is required to complete a case. The approximate cost of instruments is: in the first year, \$700; in the second year, \$950; in the third year, \$400; in the fourth year, \$160. Instruments must be paid for at the beginning of the academic year, but students who can demonstrate their need may borrow from the University or from the National Defense Student Loan Program to defray the cost. These are estimates. Students are asked not to present checks made out in advance and based upon these figures.

Microscopes. Each student entering the School must provide himself with a microscope approved by the Department of Anatomy. It is recommended that the microscope be of standard make equipped with: (a) quadruple nose piece; (b) Abbe or variable focus condenser; (c) 4x, 10x, 43x objectives; (d) 96x oil immersion lens; (e) 10x wide field eye piece; (f) mechanical stage; (g) attached lamp; (h) carrying case. The cost of a new microscope ranges from \$460 to \$700, and of a reconditioned microscope from \$150 to \$450. A limited number of microscopes are available from the School at a modest rental. Arrangements for approval and for purchase or rental should be made before registration for the opening term.

Lockers. Each entering student is assigned a locker; he must use a combination lock as prescribed by the School.

► FINANCIAL AID

Students may apply for loans and grants through the Dean's Office. New students may file application along with the application for admission. Grants are awarded only in combination with loans; any student who can demonstrate his need is eligible to apply. Application forms are issued by the Dean's Office.

Long-term loans at low interest rates are available from the University for tuition

Long-term loans at low interest rates are available from the University for tuition and fees, and under certain circumstances, for living expenses. Students who are United States citizens and residents of states having loan plans (Maine, Massachusetts, New York, and Vermont) are urged to apply to these sources. Federal loan funds are also available. Up to one month before the beginning of the academic year, dental students, along with other students who are concentrating in science, are given special consideration for National Defense Student Loans. To insure an early decision, applications should be filed for the autumn term by September 1; for the spring term by December 1.

Deferred payment of tuition may be arranged through the Marine Midland Time Plan. A brochure describing the details of the Plan is issued by the Dean's Office.

The heavy schedule of the School makes it difficult for students to undertake

The heavy schedule of the School makes it difficult for students to undertake outside part-time work during the academic year. If at all possible, other financial arrangements should be made.

➤ HOUSING

Booklets describing the University residence halls and application blanks for rooms may be obtained (for men) from the Men's Residence Halls Office, 125 Livingston Hall, Columbia University, New York 27, N.Y., or (for women) from the Johnson Hall Office, 411 West 116th Street, New York 27. Rates for the academic year are \$250 to \$470 for men and \$285 to \$525 for women. Optional prepaid board plans are available in the men's residence halls. In Johnson Hall, the residents are required to take breakfast and dinner there at a cost of \$400 for the academic year.

Students who wish to live off campus should write or call at the Registry of Off-Campus Accommodations, 115 Livingston Hall, Columbia University, New York 27, for an information sheet which describes the services rendered by the Registry.

International House, a privately owned student residence near the campus, has accommodations for about five hundred graduate students, both foreign and American. Rates for the academic year are \$375 to \$700. To be eligible for admission a student must be at least twenty-one years old and must be registered for a mimimum of twelve points or for a program of full-time research. Address the Committee on Admissions, International House, 500 Riverside Drive, New York 27.

In Woodbridge Hall, at 431 Riverside Drive, are one-bedroom, furnished apartments, which are rented for a twelve-month period to married graduate students. The rates range from \$1,260 to \$1,620 a year, including utilities. For further information and application forms write the Residence Halls Office, 125 Livingston Hall.

The King's Crown Hotel, 420 West 116th Street, near the campus, is owned by the University. It provides accommodations at reasonable rates to relatives and guests of members of the University community.

▶ LICENSE TO PRACTICE DENTISTRY IN NEW YORK STATE

Those desiring to take the New York State Board examinations are advised to address the Bureau of Professional Education, New York State Department of Education, 23 South Pearl St., Albany 7, N.Y. All applications for admission to the examination should be completed at least thirty days before the examinations begin.

The State Department of Education will admit conditionally to the examination in anatomy, physiology and hygiene, chemistry and metallurgy, and histology, applicants over nineteen years of age who are of good character, who are citizens of the United States or have declared their intention of becoming citizens in accordance with the law, who have completed the prescribed preliminary education requirement, and who are certified as having successfully completed the first two years of the required course in a registered dental school.

► STUDENT ORGANIZATIONS

OMICRON KAPPA UPSILON

Epsilon Epsilon chapter of Omicron Kappa Upsilon, national honorary fraternity,

was chartered in the School of Dental and Oral Surgery in 1934. The purpose of the fraternity is to recognize and honor a maximum of 12 per cent of the members of the graduating senior class, on the basis of scholarship, character, and possession of potential qualities for future professional growth and attainments.

THE WILLIAM JARVIE SOCIETY

The William Jarvie Society for Dental Research is a nonsecret, dental honor society, membership in which is based on scholarship and interest in dental research, and for which second-, third-, and fourth-year students are eligible. The society was organized in the School of Dental and Oral Surgery in 1920 and named after Dr. William Jarvie because of his wide interest in the promotion of dental research. The society aims to promote the spirit of research among the students.

▶ REGULATIONS

GRADING SYSTEM

The following grading system is used: A, excellent; B, good; C, fair; F, failure.

REQUIREMENTS FOR PROMOTION

A student may be admitted to the second, third, or fourth year of the dental curriculum only upon the recommendation of the officers of instruction under whom he has studied during the preceding year.

The School reserves the right to refuse readmission or promotion to any student who is believed for any reason to be unsuited to the conditions of study in the School.

Students are classified for readmission or promotion under the following categories: (1) recommended for advancement; (2) recommended for readmission to the same class; (3) recommended neither for advancement nor for readmission to the same class.

GRADUATION

The degree of Doctor of Dental Surgery will be awarded upon completion of the prescribed curriculum. Diplomas are issued at the times stated in the Academic Calendar.

Officers of Instruction

ANATOMY

- Wilfred M. Copenhaver. Professor of Anatomy; Chairman of the Department A.B., Western Maryland, 1921; Ph.D., Yale, 1925
- Edmund Applebaum. Associate Professor of Dental Anatomy D.D.S., New York College of Dentistry, 1922
- Philip W. Brandt. Assistant Professor of Anatomy
 A.B., Swarthmore, 1952; M.S., Pennsylvania, 1957; Ph.D., Columbia, 1960
- Melvin L. Moss. Associate Professor of Anatomy
 A.B., New York University, 1942; D.D.S., Columbia, 1946; Ph.D., 1954
- Charles R. Noback. Associate Professor of Anatomy
 B.S., Cornell, 1936; M.S., New York University, 1938; Ph.D., Minnesota, 1942
- Robin M. Rankow. Assistant Clinical Professor of Anatomy D.D.S., Columbia, 1940; M.D., Rochester, 1950
- William M. Rogers. Assistant Professor of Anatomy B.S., Georgia, 1921; Ph.D., Cornell, 1927
- S. C. Shen. Assistant Professor of Anatomy
 B.S., Yenching University, 1933; Ph.D., Cambridge, England, 1939
- George K. Smelser. Professor of Anatomy A.B., Earlham, 1929; Ph.D., Chicago, 1932

BIOCHEMISTRY

- David Rittenberg. Professor of Biochemistry; Chairman of the Department B.S., College of the City of New York, 1929; Ph.D., Columbia, 1934
- Max A. Eisenberg. Assistant Professor of Biochemistry
 A.B., Brooklyn, 1938; M.S., New York University, 1941; Ph.D., Duke, 1950
- Horace B. Gillespie. Assistant Professor of Biochemistry A.B., Lawrence, 1925; M.S., Illinois, 1926; Ph.D., 1930

MICROBIOLOGY

- Harry M. Rose. John E. Borne Professor of Microbiology; Chairman of the Department
 - A.B., Yale, 1928; M.D., Cornell, 1932
- Sam M. Beiser. Associate Professor of Microbiology B.S., College of the City of New York, 1942; Ph.D., Columbia, 1951
- Solon A. Ellison. Assistant Professor of Microbiology B.S., College of the City of New York, 1942; D.D.S., Columbia, 1946; Ph.D., 1958
- Bernard F. Erlanger. Associate Professor of Microbiology
 A.B., College of the City of New York, 1943; M.A., New York University, 1949; Ph.D., Columbia, 1951

- Gabriel C. Godman. Associate Professor of Microbiology A.B., New York University, 1941; M.D., 1944
- Calderon Howe. Associate Professor of Microbiology A.B., Yale, 1938; M.D., Harvard, 1942
- Elvin A. Kabat. Professor of Microbiology

 B.S., College of the City of New York, 1932; M.A., Columbia, 1934; Ph.D., 1937
- Alice W. Knox. Assistant Professor of Microbiology A.B., Vassar, 1927; Ph.D., Columbia, 1951
- Councilman Morgan. Associate Professor of Microbiology B.S., Harvard, 1943; M.D., Columbia, 1946
- Beatrice C. Seegal. *Professor of Microbiology*A.B., California, 1918; M.A., 1921; M.D., Johns Hopkins, 1924
- Stuart W. Tanenbaum. Associate Professor of Microbiology B.S., College of the City of New York, 1944; Ph.D., Columbia, 1951

ORAL SURGERY

- Rudolph H. Friedrich. Professor of Dentistry; Director of the Division D.D.S., Northwestern, 1930
- Harold D. Baurmash. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1948
- Theodore M. Bundrant. Associate Clinical Professor of Dentistry D.D.S., Howard, 1929
- Kourken A. Daglian. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1941; D.D.S., Columbia, 1943
- Morris Fierstein. Associate Clinical Professor of Dentistry D.D.S., Columbia, 1921
- Bertram Klatskin. Assistant Clinical Professor of Dentistry A.B., Cornell, 1937; D.D.S., Columbia, 1941
- Louis J. Loscalzo. Assistant Clinical Professor of Dentistry A.B., Fordham, 1942; D.D.S., Temple, 1946
- Louis Mandel. Assistant Clinical Professor of Dentistry A.B., New York University, 1943; D.D.S., Columbia, 1946
- George A. Minervini. Assistant Clinical Professor of Dentistry A.B., Columbia College, 1942; D.D.S., Columbia, 1946
- Alvin S. Nathan. Clinical Professor of Dentistry D.D.S., Columbia, 1926; B.S., New York University, 1935; M.A., 1938
- Fred Rothenberg. Assistant Clinical Professor of Dentistry D.M.D., Goettingen, Germany, 1935; D.D.S., Pennsylvania, 1937
- William J. Savoy. Clinical Professor of Dentistry B.S., Manhattan, 1931; D.D.S., Columbia, 1935
- David Tanchester. Clinical Professor of Dentistry (at Montefiore Hospital)
 D.D.S., New York University, 1921
- Seymour Zeff. Assistant Clinical Professor of Dentistry D.M.D., Louisville, 1944

ORTHODONTICS

- Nicholas A. Di Salvo. Professor of Dentistry; Director of the Division B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1952
- Charles M. Chayes. Assistant Clinical Professor of Dentistry A.B., New York University, 1937; D.D.S., Columbia, 1941
- Harold P. Cobin. Assistant Clinical Professor of Dentistry B.S., St. John's University, 1927; D.D.S., Columbia, 1931
- Harry A. Galton. Clinical Professor of Dentistry D.D.S., Columbia, 1932
- Sidney L. Horowitz. Assistant Clinical Professor of Dentistry B.S., Columbia, 1942; D.D.S., New York University, 1945
- Francis J. Loughlin. Associate Clinical Professor of Dentistry D.D.S., New York University, 1939
- Joseph Luban. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1938; D.D.S., Columbia, 1942
- Henry I. Nahoum. Assistant Clinical Professor of Dentistry A.B., Brooklyn, 1940; D.D.S., Columbia, 1943
- Armand Oppenheimer. Associate Clinical Professor of Dentistry A.B., College of the City of New York, 1926; B.S., Columbia, 1927; D.D.S., 1929
- Laszlo Schwartz. Clinical Professor of Dentistry
 B.S., College of the City of New York, 1927; D.D.S., Columbia, 1931
- Walter G. Spengeman. Assistant Clinical Professor of Dentistry A.B., Columbia, 1938; D.D.S., Columbia, 1941
- Julius Tarshis. Assistant Clinical Professor of Dentistry D.D.S., Pennsylvania, 1949
- Edward E. Teltsch. Assistant Clinical Professor of Dentistry A.B., Columbia, 1932; D.D.S., Buffalo, 1936
- Clifford L. Whitman. Clinical Professor of Dentistry D.D.S., Maryland, 1927

PATHOLOGY

- Donald G. McKay. Delafield Professor of Pathology; Chairman of the Department A.B., California, 1943; M.D., 1945
- Lester R. Cahn. Associate Professor of Oral Pathology D.D.S., New York College of Dentistry, 1918

PEDODONTICS

- Solomon N. Rosenstein. Professor of Dentistry; Director of the Division B.S., College of the City of New York, 1929; D.D.S., Columbia, 1930
- Jerry J. Adelson. Assistant Clinical Professor of Dentistry A.B., Pennsylvania, 1944; D.D.S., New York University, 1951
- Julian Schroff. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1930; D.D.S., Columbia, 1934
- William A. Verlin. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1931

PHARMACOLOGY

- Harry B. van Dyke. David Hosack Professor of Pharmacology; Chairman of the Department B.S., Chicago, 1918; Ph.D., 1921; M.D., Rush, 1923
- Herbert J. Bartelstone. Assistant Professor of Pharmacology B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945; Ph.D., 1960
- Frederick G. Hofmann. Associate Professor of Pharmacology A.B., Michigan, 1943; Ph.D., Harvard, 1952
- Wilbur H. Sawyer. Associate Professor of Pharmacology M.D., Harvard, 1945; Ph.D., 1950
- Shih-Chun Wang. Professor of Pharmacology B.S., Yenching, 1931; M.D., Peiping Union Medical College, 1935; Ph.D., Northwestern, 1940

PHYSIOLOGY

- Magnus I. Gregersen. John C. Dalton Professor of Physiology; Chairman of the Department A.B., Stanford, 1923; M.A., 1924; Ph.D., Harvard, 1930
- Shu Chien. Assistant Professor of Physiology M.B., National Taiwan, 1954; Ph.D., Columbia, 1957
- Louis J. Cizek. Associate Professor of Physiology B.S., Fordham, 1937; M.D., Columbia, 1941
- Robert J. Dellenback. Assistant Professor of Physiology A.B., California (Los Angeles), 1950; M.A., 1953; Ph.D., 1955
- Elizabeth C. Gerst. Assistant Professor of Physiology A.B., Mount Holyoke, 1951; Ph.D., Pennsylvania, 1957
- Werner R. Loewenstein. Associate Professor of Physiology B.A., Chile, 1945; D.M.D., Chile, 1950
- William L. Nastuk. *Professor of Physiology* B.S., Rutgers, 1939; Ph.D., 1945
- Mero Nocenti. Assistant Professor of Physiology A.B., West Virginia, 1951; M.S., 1952; Ph.D., Rutgers, 1955
- Walter S. Root. Professor of Physiology B.S., Wesleyan, 1924; Ph.D., Pennsylvania, 1930
- William W. Walcott. Associate Professor of Physiology A.B., Yale, 1933; Ph.D., Columbia, 1944

PSYCHIATRY

- Lawrence C. Kolb. Professor of Psychiatry; Chairman of the Department M.D., Johns Hopkins, 1934
- James P. Cattell. Assistant Clinical Professor of Psychiatry A.B., Miami, 1938; M.D., Harvard, 1942

PUBLIC HEALTH

- Ray E. Trussell.* Joseph R. DeLamar Professor of Administrative Medicine; Associate Dean (Public Health) of the Faculty of Medicine A.B., Iowa, 1936; M.D., 1941; M.P.H., Johns Hopkins, 1947
- Arthur Bushel. Adjunct Associate Professor of Dental Public Health Practice A.B., Brooklyn, 1940; D.D.S., Columbia, 1943; M.P.H., 1947
- Leonard J. Goldwater. Professor of Occupational Medicine
 A.B., Michigan, 1924; M.D., New York University, 1928; Med.Sc.D., Columbia, 1937; M.S., 1941
- Alvin R. Jacobson. Associate Professor of Sanitary Science B.S., North Dakota, 1935; M.S., 1937; Ph.D., Iowa, 1941
- George Rosen. Professor of Public Health Education
 B.S., College of the City of New York, 1930; M.D., Berlin, 1935; Ph.D., Columbia, 1944; M.P.H.,
 1947

RESTORATIVE DENTISTRY

- Gilbert P. Smith. Professor of Dentistry; Director of the Division; Dean of the Faculty
 D.D.S., Minnesota, 1927
- Howard A. Arden. Associate Professor of Dentistry B.S., Fordham, 1943; D.D.S., Columbia, 1946
- Herbert D. Ayers, Jr. Associate Clinical Professor of Dentistry A.B., Columbia, 1929; D.D.S., 1931
- James W. Benfield. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1945
- Sebastian A. Bruno. Assistant Clinical Professor of Dentistry D.M.D., Tufts, 1948
- Stanislaw H. Brzustowicz. Assistant Clinical Professor of Dentistry B.S., St. John's, 1940; D.D.S., Columbia, 1943
- Edward A. Cain, Jr. Professor of Dentistry B.S., Fordham, 1942; D.D.S., Columbia, 1945
- Louis A. Cohn. Associate Clinical Professor of Dentistry D.D.S., Pennsylvania, 1928
- Joseph C. De Lisi. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1952
- Joseph E. Fiasconaro. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1943
- Herbert P. Fritz. Assistant Clinical Professor of Dentistry B.S., New York University, 1933; D.D.S., Columbia, 1936
- Robert E. Herlands. Professor of Dentistry A.B., Columbia, 1941; D.D.S., 1944
- George W. Hindels. Associate Clinical Professor of Dentistry M.D., Vienna, 1938; D.D.S., Columbia, 1943
- Irvin L. Hunt, Jr. Associate Professor of Dentistry D.D.S., Pennsylvania, 1929

^{*} On leave.

- Joseph M. Leavitt. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1940
- George F. Lindig. Associate Clinical Professor of Dentistry D.D.S., Minnesota, 1924
- John J. Lucca. Associate Professor of Dentistry A.B., New York University, 1941; D.D.S., Columbia, 1947
- William Miller. Assistant Clinical Professor of Dentistry B.S., Columbia, 1927; D.D.S., 1931
- William J. Miller. Associate Clinical Professor of Dentistry A.B., New York University, 1940; D.D.S., Columbia, 1943
- Irving J. Naidorf. Assistant Clinical Professor of Dentistry B.A., New York University, 1937; D.D.S., Columbia, 1941
- Max A. Pleasure. Associate Clinical Professor of Dentistry D.D.S., Pennsylvania, 1928; M.S., Columbia, 1941
- Thomas W. Portway. Assistant Professor of Dentistry B.S., Fordham, 1950; D.D.S., Columbia, 1956
- Harold Sherman.* Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1935; D.D.S., Michigan, 1946
- William H. Silverstein. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1937
- Ennio L. Uccellani. Assistant Professor of Dentistry B.S., College of the City of New York, 1946; D.D.S., Columbia, 1948

STOMATOLOGY

Edward V. Zegarelli. Edwin S. Robinson Professor of Dentistry; Director of the Division

A.B., Columbia, 1934; D.D.S., 1937; M.S., Chicago, 1943

- Frank E. Beube. Clinical Professor of Dentistry L.D.S., D.D.S., Toronto, 1930
- Jack Budowsky. Associate Clinical Professor of Dentistry D.D.S., Columbia, 1943
- Joseph A. Cuttita. Associate Professor of Dentistry A.B., Fordham, 1932; M.S., 1935; D.D.S., Columbia, 1939
- Lewis Fox. Associate Clinical Professor of Dentistry D.D.S., Maryland, 1927
- Ida M. Golomb. Assistant Clinical Professor of Dentistry A.B., New York University, 1938; D.D.S., 1945
- Robert Gottsegen. Associate Clinical Professor of Dentistry A.B., Michigan, 1939; D.D.S., Columbia, 1943
- Leonard Hirschfeld. Associate Clinical Professor of Dentistry A.B., Columbia, 1941; D.D.S., 1944
- Ellen N. Hosiosky. Assistant Clinical Professor of Dentistry D.M.D., Basle, Switzerland, 1935; D.H., Guggenheim Dental Clinic, 1939; D.D.S., Columbia, 1947
- Mortimer Karmiol. Assistant Clinical Professor of Dentistry B.S., College of the City of New York, 1939; D.D.S., Columbia, 1943

^{*} On leave until January 1, 1962.

Austin H. Kutscher. Assistant Professor of Dentistry B.S., New York University, 1945; D.D.S., Columbia, 1946

Irwin D. Mandel. Associate Clinical Professor of Dentistry B.S., College of the City of New York, 1942; D.D.S., Columbia, 1945

Melvin L. Morris. Associate Clinical Professor of Dentistry B.S., College of the City of New York, 1934; M.A., Columbia, 1937; D.D.S., 1941

Ferdinand A. Tuoti. Assistant Clinical Professor of Dentistry D.M.D., Harvard, 1928

Robert F. Walsh. Assistant Clinical Professor of Dentistry D.D.S., Columbia, 1947

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RESEARCH ASSOCIATES

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14

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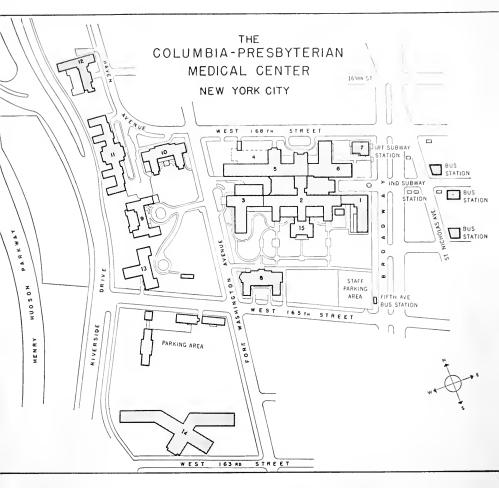
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- 8. INSTITUTE OF OPHTHALMOLOGY
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- 10. NEUROLOGICAL INSTITUTE
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